Employment for Youth – A Growing Challenge for the Global Economy

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Employment for Youth – a Growing Challenge for the Global Community

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INTRODUCTION

Social and economic challenges facing young people today must be understood in terms of the complex interaction between unique demographic trends and specific economic contexts. There has been an unprecedented growth in the number of young people in the Global South in the past two decades, and these youth face situations where the forces of economic globalization interact with historically determined national and regional economic structures and policies. Although we will argue that unemployment is only a partial measure of employment inadequacy for youth, especially in poor countries, its ready availability and widespread use make it an important starting point. Globally, the ILO estimates that the number of unemployed youth is on the rise again since 2011, after declining somewhat from the peak it reached at the height of the global financial crisis. It is expected to reach 73.4 million young people by 2013 (ILO 2012). The global youth unemployment rate has also been rising since 2011; it is currently estimated at 12.6 percent and is projected to increase to 12.8 percent by 2018. In contrast, the global adult unemployment rate, while also rising slightly, is much lower at 4.6 percent in 2013 (ILO 2012).

While we strive to take a global perspective on youth employment challenges, our focus in this paper is on the developing regions of Asia, Africa and Latin America. These are the regions of the world where the great majority of youth in the world currently reside. These are also the regions where youth employment challenges are most likely to be associated with the demographic challenges posed by growing youth populations in recent decades. We focus primarily on youth ages 15 through 24 but sometimes also consider 25- to 29-year-olds because there is growing evidence that the transition to adulthood, including the transition to work, is now more protracted and extends into these higher ages.

The demographic changes, which can be broadly characterized as the "youth bulge" phenomenon, have been fairly similar across developing regions of the world, albeit with somewhat different timing, pace, and intensity. Nearly all parts of the developing world saw unprecedented increases in both the number and proportion of youth between the ages of 15 and 24 during the past five decades, but the future trajectory of today's youth demographic will deviate substantially over the next four decades.

We argue in this paper that employment inadequacy among youth is a much broader phenomenon than youth unemployment as conventionally defined. Remaining out of work to actively search for employment is often either fruitless and/or unaffordable for many youths in developing countries if there are few wage and salary jobs to be had. Youth in these situations are forced to engage in any sort of livelihood activity they can muster, even if extremely marginal; or, if they can rely on their families for support, they may remain inactive after completing their schooling. Broader measures of employment inadequacy are needed to capture these two situations, but most of these measures will require new data collection practices.

One such measure, called NEET for Not-in-Education, Employment or Training, is increasingly being used to study youth employment challenges in OECD countries (OECD 2012). While this measure does not take into account youth engaged in unproductive or marginal employment, it does capture a broad category of youth for whom employment is either not an option or at least not one worth actively searching for. The NEET measure is not generally available for most developing countries, but we attempt to estimate it for a broad set of countries to see what it can add to the standard unemployment measure. Measuring the adequacy of employment for youth actually engaged in some sort of economic activity is even more challenging. The ILO has recently proposed a number of measures that attempt to capture the extent of labor

underutilization, including vulnerable employment, non-standard and irregular employment, but these measures have not yet received widespread acceptance and are consequently not broadly used.

After attempting to characterize the dimensions of the youth employment challenge, we move to a brief review of existing attempts to address the youth employment challenge. We focus in this discussion on education and training programs that prepare youth for the labor market and active labor market programs that help them transition into the world of work. We attempt to synthesize the implications and lessons learned from rigorous evaluations of such programs. Although these programs are fairly widespread, most of the evaluations and assessments that have been carried out so far have been done for programs implemented in upper- and middle-income countries. The applicability of these lessons learned to poor countries is therefore still a work in progress.

THE YOUTH BULGE PHENOMENON

Although the challenge of youth employment in the developing world is linked to a complex interaction of economic, social and demographic factors, its recent prominence on the global agenda is clearly associated with the explosive growth in both the number and share of youth in the population in recent decades in much of the developing world – a phenomenon that has increasingly become known as the "youth bulge." Briefly, the youth bulge is a significant change in the age structure of the population, where the proportion of youth increases substantially compared to other age groups, both older and younger. It has emerged as a result of demographic transition: falling early childhood mortality followed, with a lag, by falling fertility. The interval of the lag results in surviving children (and, later, youth) being a larger fraction of the population than ever before, or ever after. **Figure 1**, which shows the evolution of

the proportion of youth in the total population by region, illustrates this phenomenon. The shape of the bulge depends on how fast early childhood mortality declined (which affects the steepness of the increase) and how soon fertility began to decline and the rate at which it declined (which affects the timing of the downturn and slope of the decline).

The youth bulge phenomenon does not necessarily lead to adverse outcomes for youth. A growing number of young people has undoubtedly placed considerable stress first on educational systems, as young people go through schooling ages, and then on labor markets, housing markets and health systems, as they transition to adult roles. Nevertheless, youth bulge effects relating to education, health, and employment have varied considerably. The goal of this paper is to characterize the way in which social and economic systems across the developing world have responded to the labor market challenges posed by the youth bulge. Such responses will be reflected by youth employment and unemployment rates, as well as youth earnings.

The timing and intensity of the youth bulge, by region

In almost all parts of the developing world the number of young people has increased at unprecedented rates over the period 1960 to 1990. As shown in **Figure 1**, the number of youth peaked in East Asia around 1990, and it was close to its peak in 2010 in Latin America and the Caribbean and in Southeast Asia.[1] The growth in the number of youth has also slowed

[1] The data used throughout this paper has been gathered from a variety of sources. We present data gathered from the United Nations Population Division, the International Labor Organization (ILO) and select censuses for individual countries (see footnote 2). The UN Population Division and the ILO have similar definitions for world regions but there are some differences. We have kept the regional definitions from the original sources, which can be found on the respective organizations' website. The reader should use caution when comparing between data sources. For example, for the UN Population Division, the Middle East falls within Western Asia (UN 2013). Countries such as Armenia, Georgia and Cyprus as well as Arab countries are counted together. On the other hand, the ILO counts the Arab countries and Iran within the Middle East and North Africa (MENA) region. Additionally, when examining censuses from selected

considerably in South Asia, where it will peak in about 2030 at just 5 percent above where it was in 2010. The two regions which will continue to see significant increases in youth populations in the future are (1) West Asia and North Africa and (2) Sub-Saharan Africa. In the former, the number is expected to peak in 2040 at 20 percent above its level in 2010. In sub-Saharan Africa, it will continue growing steadily through 2050, when it will more than double its 2010 level.[2]

The relative size of the youth cohort is also of interest in describing future trends. For the purpose of assessing labor supply pressures, it is the size of the youth population relative to the working age population that matters. Globally, this proportion was about 27 percent in 2010. It is lowest in industrialized countries; for example, in the United States in 2010, youth 15-24 made up about 23 percent of the population aged 15-64 (and about 14 percent of the total population). Currently, it is highest in sub-Saharan Africa, where youth make up about 37 percent of the working age population.

As shown in **Figure 2**, the bulk of the developing world's youth population is currently in East Asia and South Asia, but also increasingly in sub-Saharan Africa. Those three regions combined were estimated to have 760 million young people in 2010, 63 percent of the world total. This number is expected to grow to 832 million by 2050. The most striking aspect of **Figure 2** is that the youth population has recently peaked or will soon peak in all developing regions except for sub-Saharan Africa, where it is expected to rise steadily through 2050. Note that while estimates past 2010 are projections, the figures are fairly certain up to about 2030 since most of these individuals have already been born (and are children).

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countries, we have generally used ILO categories but on occasion grouped regions together, such as in the case of South Asia and Southeast Asia.

[2] In this section we rely on the UN's Population Division median variant projections from the 2010 Revision of the World Population Prospects (UN 2011).

The phase of the demographic transition that places the greatest demand on labor markets in terms of job creation and labor absorption is when the number of new entrants is large relative to existing workers. This is best proxied by the proportion of youth to the working age population, which changes as countries move through the demographic transition. As shown in **Figure 3**, youth as a percentage of the working age population peaked earliest in East Asia: at about 1970 it reached approximately one-third of the working age population. By 2010, it had fallen sharply to 22.5 percent, and it will continue to fall rapidly until about 2025, when it will reach less than half of its 1970 peak. The proportion of youth among the working age population exhibits a fairly similar time trend in almost all the other developing regions. It peaked in 1980 at somewhere between 35 and 37 percent of the working age population in Latin America and the Caribbean, West Asia and North Africa, South Asia and Southeast Asia. It fell fairly rapidly from that point on in Southeast Asia and in Latin America and the Caribbean, and somewhat more slowly in West Asia and North Africa and in South Asia until 2005. Both these regions, however, are projected to experience an accelerated rate of decline in this proportion from 2005 to 2020. Sub-Saharan Africa is the clear outlier in this case as well. The proportion of youth in the working age population there peaked somewhere between 2000 and 2005 at 37.7 percent, a level higher than in any other developing region, and it will only retreat very gradually from that peak through 2050. Based on projections of both the absolute and relative sizes of the youth population, we can expect that demographically-driven labor supply pressures will be subsiding significantly in the post-2015 developing world, except in Sub-Saharan Africa.

In a seminal paper about the demography of youth in the developing world, David Lam (2007) classifies countries into four categories depending on when they will reach their peak youth population. His analysis confirms that large parts of the developing world are already past the

peak demographic stress caused by the youth bulge. Continued pressure will be felt for the next two decades in South Asia, some parts of Latin America, Northern Africa and Western Asia, but that pressure is already ebbing as the growth of the youth population in these regions slows. Sub-Saharan Africa and parts of South Asia, such as Pakistan, will continue to experience demographic stress from rapidly growing youth populations in the foreseeable future.

Unbalanced sex ratios

In addition to changes in the absolute and relative numbers of youth, in some regions the sex composition of youth is also changing. An additional challenge for countries in Southern, Eastern, and Southeast Asia comes from a strong preference for sons, rooted in patrilineal family systems and patriarchal social, legal, and economic structures. Technological change in recent decades has made it possible for many families to achieve this goal via sex-selective abortion, although female infanticide and discrimination in medical care and nutrition have also been documented (Li 2007). The end result is a very "unbalanced" sex ratio, where males exceed females, sometimes by substantial margins.

In China, sex ratios at birth are close to normal for first-born babies, with births of boys exceeding girls at about a ratio of 107:100 male-to-female live births. Sex ratios at birth for second-born children, in contrast, are estimated as being 121:100 in 1990 (two years after 24-year-olds were born), then shooting up to 152:100 in 2000 (two years after 15-year-olds were born). Sex ratios for third-born children are even more skewed (Li 2007). Overall, sex ratios at the time of their birth for Chinese youth aged 24 in 2013 were over 115:100, and sex ratios for future cohorts of youth were continuing to rise.

While males currently make up more than half of all young people in the developing world as a whole, **Figure 4** shows that the sex composition is particularly unbalanced in South Asia and

East Asia. In East Asia, the situation is becoming increasingly unbalanced, with young men making up nearly 52.8 percent of youth in 2010 and rising to 54.5 percent by 2025. This imbalance will have serious consequences on the ability of the "excess" males to form families and make a successful transition to adulthood. We discuss these implications further, below.

Regional Labor Market Responses to the Youth Bulge

The changing growth rate and age structure of the population that is associated with different stages of the demographic transition pose both challenges and opportunities for development. The opportunities of the period just following rapid fertility declines, which is accompanied by a rapid growth in the share of the youth population, are highlighted in an influential literature on the "demographic dividend" (e.g., Bloom and Williamson, 1998; Bloom, Canning, and Sevilla, 2003). This literature stresses the positive impact of falling child dependency ratios and the growth of the share of the working age population on economic growth. For instance, this literature argues forcefully that such demographic changes account for a significant portion of the rapid growth experienced in East Asia in the 1980s and 1990s. These authors argue that the impact of growth works through a number of mechanisms, including the increase in the number of producers per capita, a deepening of human capital investments as educational resources are allocated to a smaller number of children, and higher savings rates as workers support fewer dependents.

For such a dividend to materialize, economic conditions must make it possible to quickly absorb the new entrants to the labor force into productive employment. In East Asia, export-led industrialization driven by the region's rapid incorporation in the global economy combined with prior investments in education to generate a virtuous cycle of rising supply and demand for human capital. A similar positive dynamic was arguably partially responsible for the post-war

boom in Europe and the United States as the baby boom generation was coming of age. Under a different set of economic conditions, both in terms of internal policies and institutions and external factors, the demographic dividend could easily turn into a demographic burden.

Western Asia and Northern Africa provides perhaps the most pronounced instance of the "youth demographic burden." The region's economy has been dependent on the production and export of hydrocarbons (oil), with most of the revenues from that industry flowing to the state, thus leading to the economic dominance of the state sector. This allowed the state to perpetuate a social contract aimed at political stability, often referred to as the "authoritarian bargain," consisting of an implicit deal between rulers and the middle classes. The middle classes received state welfare in the form of secure, protected, and often well-paid public sector jobs, and access to subsidized services and commodities, in return for political quiescence and tacit acceptance of authoritarian rule. Thus, employment in the bureaucracy became the main mechanism for distributing the hydrocarbon rents. This created expectations for public sector employment, especially for the more educated. Even as the state's side of the bargain eroded throughout the 1990s and after, young people continued to expect public sector employment, but they were now faced with either long unemployment queues or uncertain prospects in an informal economy that was unwilling to pay much of a premium for their educational credentials. With their numbers soaring as a result of the youth bulge and rapidly growing educational attainment, educated youth joined the ranks of the unemployed in unprecedented numbers.

South Asia's demographic trajectory appears to be very similar to that of Western Asia and Northern Africa. It has had very similar rates of growth of the youth population to date as well as a similar profile in terms of the shape of the youth bulge. Labor market outcomes have, however, been quite different. Educated youth have done quite well, as they have integrated into

the globalizing service sector, although there is evidence of skill mismatches that lead to higher unemployment rates among skilled workers. Less educated youth have suffered from underemployment in the informal economy. Employment among less educated youth in South Asia is often a necessity, resulting in the region having one of the highest working poverty rates in the world (ILO 2013a). Youth unemployment rates in South Asia tend to increase with family income and educational attainment, confirming that open unemployment is often a luxury that can only be afforded by youth whose families can support them while they are looking for work (Ibid.).

The youth bulge has had a less pronounced impact on ***Latin America*** than on other developing regions. The size of the youth population is currently at its peak and will remain at this level for the next two decades. Labor markets have generally kept pace with both the entry of women and youth into the labor market, leading to high employment rates and decreasing wage inequality (Fawcett 2003, World Bank 2012a). Growing industrial centers and increased commodity exports absorbed much of the youth entering the labor market. Another driving force for decreased wage inequality is reduced returns to higher education because of the broader availability of tertiary educational institutions of varying quality.

The demographics of the youth bulge in ***Southeast Asia*** resemble those in Latin America. While Southeast Asia has had lower levels of inequality than Latin America, the region's incorporation into global manufacturing value chains provided valuable employment opportunities for youth, especially young women, who previously had fewer employment opportunities. However, some parts of the region have been left behind, with youth trapped in low productivity rural and informal sector activities.

Sub-Saharan Africa is perhaps the region of the world that will face the greatest challenges with the youth bulge going forward. Because fertility has not declined as sharply as in other regions, sub-Saharan Africa will not benefit from a demographic dividend in the coming decades. Youth are expected to be about 20 percent of the population there for the next couple of decades, and they will make up over 30 percent of the working age population through about 2045. Despite these pervasive and enduring demographic pressures, the ILO projects that youth unemployment in Africa will remain stable at 11.7 percent through 2018, a rate that is well below the world average (ILO 2102). This, unfortunately, does not mean that African labor markets are currently or will in the foreseeable future be coping adequately with demographic pressures. It simply means that unemployment is a poor measure of employment inadequacy in poor, agrarian economies, where most jobs are either in family farms or in the informal economy. As we will discuss below, other measures, such as the ILO's labor underutilization rate, show very high levels of employment inadequacy and vulnerability in sub-Saharan African economies. These measures are bound to get even worse as demographic pressures accelerate.

THE CHALLENGE OF YOUTH EMPLOYMENT

We argued so far that there have been varied regional outcomes in response to the youth bulge phenomenon, some positive and some negative, with the variation being primarily a function of the social and economic institutions that either allow or hinder different societies as they prepare young people for productive roles and as they deploy them in such roles. For youth bulge members to become productive labor force workers, it is essential that there is an adequately high level – and growing – demand for labor. As the youth population grows into adulthood, the ratio of physical capital to labor supply falls; without demand-fed expansion, the result can include stagnating or lower wages for workers of all ages, as well as unemployment or

underemployment of new entrants to the labor force. In cases of inadequate growth in labor demand to capitalize on the "youth dividend," the forms that adverse labor market outcomes can take will depend on the structure of production, the degree of organization or formality of labor markets, the educational composition of youth and the expectations that come along with education, and the degree of support that families can provide as young people make their transitions to employment. In this section we discuss the challenges of measuring employment inadequacy for youth, present various measures that go beyond the standard unemployment measures, and provide recommendations for how to improve these measures.

The challenges of measuring employment inadequacy

As discussed above, unemployment rates are not a good measure of employment inadequacy for youth in many situations where remaining jobless while searching for work is either pointless or infeasible. A large number of youths may be neither in school nor employed, but may not be actively seeking employment due to discouragement or simply a lack of organized labor markets in their regions. They would not show up among the ranks of the unemployed.

More important for the most rural, least-developed economies is the necessity for youth to undertake whatever livelihood activities they can find or create, even if these have extremely low levels of productivity and/or do not nearly fill a work day. If they engage in any kind of economic activity for one hour or more during the reference week, they are counted as employed according to international definitions, but the quality and/or quantity of this employment is often inadequate.

Another challenge for cross-national comparisons is that different countries use different criteria for unemployment, in particular with respect to whether or not a person is actively searching for a job. The reference period for when the job search occurred can also vary from one week to

three months. What kinds of search effort counts as "actively searching" also varies. Sometimes unemployment is defined without search being a required criterion. This is referred to by the ILO as the "relaxed definition" of unemployment (See **Table 1** below). This definition captures the so-called "discouraged unemployed" who have given up on searching.

A measure that casts a wider net and abstracts away for whether a young person is ready and available for work or actively searching for it is the "Neither in Employment nor in Education or Training" (NEET) measure. This measure is particularly relevant for youth because it captures those who are not investing in their future either by acquiring human capital through education or training or by gaining experience on the job. We discuss this measure in more detail below.

A number of attempts have been made to capture employment inadequacy for those who are actually employed. Table 1 summarizes concepts that have been proposed by the ILO but that have not yet seen widespread implementation. These concepts have been used in the ILO's school-to-work transition surveys (SWTS) in an attempt to operationalize the notion of labor underutilization (ILO 2103a). The concept of time-related underemployment refers to situations where individuals are working less than full-time and would actually like to work longer hours. This could be a useful measure when wage and salary employment is the norm and individuals do not have full control over their work time. However, when self-employment or unpaid family work are widespread, individuals could be working very long hours with meager returns. The ILO proposes the notion of "vulnerable employment" to attempt to capture this category of workers (see **Table 1**). Finally, the notion of "irregular employment" tries to broaden the vulnerable employment measure to include wage and salaried workers without work contracts or with limited duration contracts (less than one year for developing countries and undefined for high-income economies). Youth labor underutilization is then defined to include irregular

employment, unemployment under the relaxed definition and the residual category of inactive youth who are neither in the labor force, nor in education or training.

Table 1. Measures of Employment Inadequacy

Definitions and Measures	
Unemployment	The status of individuals above a specified age who are without work, currently available for work, and actively seeking work. Those seeking work include those who are looking for land, building machinery, equipment, financial resources, or permits and licenses to start their own enterprises.
Unemployment, relaxed definition	Same as unemployed but relaxing the criterion of actively seeking work.
NEET	The **Neither in Employment, Education or Training (NEET)** population is made of persons above a specified age who are not employed, not enrolled in education or in vocational training.
Residual inactive youth	Those not in the labor force (neither employed nor unemployed using relaxed definition) nor enrolled in education or training.
Time-related underemployment	Refers to situations where working individuals are willing and available to work longer hours.
Vulnerable Employment	Unpaid family workers and own account workers without employees
Irregular employment	Wage and salaried workers holding a contract of limited duration (less than 12 months in developing countries) or no contract at all, plus workers in vulnerable employment as defined above.
Youth labor underutilization	The three categories of irregular employment, unemployment (relaxed definition), and residual inactive youth, when combined, make up labor underutilization.

Sources: ILO 2012 and ILO 2013a

Unemployment estimates and projections

The ILO estimates that the global youth unemployment rate rose from 11.5 percent in 2007 to 12.7 percent in 2009 as a result of the world financial crisis, after declining sharply from 2005 to 2007. Again according to the ILO, the youth unemployment rate declined slightly to 12.3 percent in 2011 but resumed its rise in 2012 and 2013, when it reached 12.6 percent, just below its peak

at the height of the financial crisis. The ILO projects that the global youth unemployment rate will continue to rise through 2018, when it will reach 12.8 percent. These estimates translate into 73.4 million unemployed youths in 2013 as compared to 69.9 million in 2007. The ratio of youth to adult unemployment rates globally in 2007 was 2.9, but it is estimated to have dropped to 2.7 by 2013 (ILO 2013a, pp. 103-104).[3]

While youth unemployment rates in more developed economies and Central and Eastern Europe were strongly affected by the world financial crisis, peaking in either 2009 or 2010, the developing regions of the world were less affected. Still, several regions have continued to experience secular increases in youth unemployment rates. In East Asia, the Middle East and North Africa, the ILO's projected unemployment rates in 2013 are significantly higher than rates at the peak of the crisis. Nearly all of the world's developing regions are projected to continue on an upward unemployment trend until 2018, except for Sub-Saharan Africa, where youth unemployment is projected to remain flat. The regions with the fastest projected increases from 2013 to 2018 are Southeast Asia and the Pacific and East Asia. However, by far the highest rates of youth unemployment will continue to be found in the Middle East, where they are projected to reach 30 percent, followed by North Africa, where they are projected to reach 24 percent by 2018 (see **Figure 5**).

Unemployment measures seem to show adverse outcomes for youth in some countries and not in others. Regions such as North Africa and Western Asia have experienced very high youth

[3] The ILO's model to project youth and adult unemployment is based on Okun's Law, which relates changes in unemployment to changes in GDP. The model attempts to take into account cyclical crises and the rate at which unemployment recovers after such crises using projections on GDP growth from the IMF's World Economic Outlook. The projection model probably works well for high-income economies where unemployment tends to be cyclical, but it may not do a good job capturing trends in structural unemployment that are primarily driven by demographics and the educational composition of the labor force. See ILO (2010) and ILO (2013a) Annex E for more discussion of the ILO's projection model.

unemployment in the last decade, but other regions with equally pronounced youth bulges, such as sub-Saharan Africa and South Asia, experienced much lower youth unemployment, as shown in **Figure 5**.

The ratio of youth-to-adult unemployment rates is highest in Southeast Asia and the Pacific, where it was estimated by the ILO to be 5.2 in 2012, nearly double the world average ratio of 2.8. It is also quite high in South Asia and the Middle East, where it is nearly 4, suggesting that in these regions unemployment is primarily a first-time labor market insertion phenomenon. The ILO projects that the world average youth-to-adult ratio will drop to 2.7 in 2013 and will remain constant at that level through 2018. The projections indicate that the ratio will either remain constant or drop very slightly in all the developing regions except for Southeast Asia and the Pacific, where it will continue its steady upward trend. It is projected to reach as high as 5.5 in that region by 2018, suggesting that youth unemployment will continue to be the core of the unemployment problem in that region for some time to come (ILO 2103a, p. 108).

Because of the nature of their economies and labor markets, employment challenges in some economies do not manifest themselves as open unemployment but rather as high rates of underemployment, employment vulnerability and inadequate earnings. For open unemployment to be observed, certain conditions must be met. Open unemployment tends to be associated with queuing for formal sector jobs: where the probability of formal sector work is higher, youth and their families feel that it is reasonable for youth to remain unemployed to search for or queue for such jobs. This is the case in North Africa and the Middle East, where the dominant role of government in the economy has historically led to employment opportunities for educated workers in the bureaucracy and state sector. In recent years, however, the growth of the state-dominated formal sector has been anemic relative to the rapid growth of educated workers.

Because youths' expectations have not changed, and they continue the strategy of searching and queuing, open unemployment has increased rapidly as youth bulge members enter working ages.

In other contexts, demographic pressures from the youth bulge do not manifest themselves as high youth unemployment. If formal sector jobs are scarce or are perceived to be virtually inaccessible, young job seekers will pursue any opportunities they can find on family farms or in microenterprise, petty trade or casual labor rather than remain openly unemployed. This is essentially what is happening in much of sub-Saharan Africa and South Asia, with estimated unemployment rates at 11.8 and 9.3, respectively, in 2012 (ILO 2013a).

Regardless of whether adverse labor markets outcomes are reflected in high youth unemployment rates or not, gendered patterns are typically observable. In the absence of adequate labor demand, girls and young women will be more likely to be found doing non-labor-force work, including caring labor (for young children, the ill, disabled, and aged) and household maintenance tasks (cooking, cleaning, washing), and subsistence labor. Many will not have experienced labor force work either themselves or among their peers and therefore do not report themselves as seeking such work even if they would be able to engage in it if it were available. As a result, many non-employed young women will simply not show up among the ranks of the unemployed, especially when the "seeking work" criterion is imposed. On the other hand, where there is a precedent for women, especially the educated ones among them, to get formal sector jobs, often in government, young women will have an incentive to queue for such jobs and therefore show up in the unemployment queue. That appears to be the case in Latin America, the Middle East and North Africa, where female unemployment rates are substantially higher than those of males (ILO 2013a, p. 104).

NEET: A better measure of youth employment inadequacy?

When adverse labor market conditions do not produce high unemployment rates, using an alternative measure of potential labor market availability is advisable. One such alternative is the NEET measure - Not in Education, Employment, or Training. Formerly this status was sometimes called "idle."

Gender and Age Patterns. Using mainly census data[4] from the most recent decade available, **Figures 6 through 9** show the percentage of youth 15-29 who are "NEET" for selected countries, by region. That is, these youth are not going to school, and they do not admit to having labor force employment. (The census data do not include information on training outside of formal education.)

Figure 6 shows that NEET is always higher for females than for males; usually the difference is substantial, with the female percentage NEET double or triple that for males. Among the 23 countries included in

Figure 6, NEET for males ranges between 10 and 30 percent with only four exceptions (three below 10 percent, one above 30 percent). NEET estimates for females, however, are almost all above 20 percent (only two are as low as 10 percent), with ten countries at or exceeding 40 percent NEET for female youth.

While the unemployment rate is biased downward due to discouraged workers, NEET is biased upward by its inclusion of some youth who are fully occupied in non-labor-market activities: parenting and doing other so-called "reproductive" tasks that maintain the labor force. These time-consuming activities include cooking, cleaning, laundry, child care, and other caring

[4] Census (and survey, in the case of India) microdata samples that are part of the IPUMS-International online database were used for those of our figures with sources listed as IPUMS-I (Minnesota Population Center 2011). We aimed to select countries with relatively large populations, with multiple decades of data available via IPUMS-I, and with both employment and school enrollment data available. A different selection might reveal other patterns. For Egypt, we use the Egypt Labor Market Panel Survey of 2012 carried out by the Economic Research Forum and the Egyptian Central Agency for Public Mobilization and Statistics. The most recent Egypt census (2006) does not have the schooling attendance information for the relevant age groups.

activities for the ill and the infirm. Most censuses and surveys do not identify these individuals, nor would it be strictly correct to exclude them from our NEET estimate, since some of these young women and men would prefer to engage in labor market employment, if they could find jobs.

Differences in whether or not military draftees – who are mostly male – are counted among the employed reduce the comparability of the NEET estimates, in some cases biasing their levels upward. Among those countries that report draftees as being non-employed, we examined the case of Egypt. We found that the NEET percentage was very high for males of age to be drafted into the military (20-24): almost 40 percent. A re-estimate showed that by categorizing military conscripts as employed, there was little difference between the NEET percentage and the unemployment percentage for males.[5]

Figure 7 shows how, for the 23 countries shown, NEET tends to be lower for 15-19 year-olds, some of whom are still in school. This is true for both males and females. Still, it very high in some cases: for example, it is over 55 percent for females in Egypt and close to 40 percent for males in Malawi. In almost every case presented in **Figure 7**, average percentage NEET increases between the 15-19 and 20-24 age groups. Exceptions where NEET decreases slightly going into the twenties include three countries in South East Asia (Cambodia, Indonesia, and Malaysia) and three countries in sub-Saharan Africa (Malawi, Senegal, and Tanzania). Overall, however, very high percentages of male and female youth are neither employed nor in school in their early 20s, the ages in which many youth complete their education and enter the labor market. Male percentages NEET are over 40 percent in South Africa, and generally between 10 and 30 percent. Female percentages NEET

[5] For our sample of countries, we were able to confirm that Argentina, Iran, Jordan, Mexico and Venezuela count all military personnel as employed. We could not confirm the employment status of draftees from census documentation in other countries.

top out at almost 90 percent (Malawi), but most of the examples shown range between 70 and 30 percent. As youth move into their upper 20s, males are more likely to find labor force work, while females often show even higher levels of NEET as they marry and transition from labor force work to household and care work.

NEET and unemployment. What is the relationship between the percentage of youth who are unemployed and the percentage in the NEET category? Note that this question does not concern the unemployment *rate*, which has as its denominator those employed plus those actively searching for work. The unemployment rate answers the question: among those who want labor force work and who are actively seeking it, what fraction had not found it (at the time they were asked)? This strict concept of unemployment is more useful in some contexts than in others. Youth who have never had a job may not yet be actively searching for work, while others may have searched without success and become discouraged, and yet others may be queuing for a formal sector job without looking elsewhere. Because we are concerned with how all youth are spending their time – with unsuccessful labor market searching being one option – our denominator includes all youth, and we compute an unemployment *percentage*. This measure is sometimes called the "unemployment ratio."

Figure 8 includes only those youth found in the NEET category and shows what percentage of them meet the formal definition of unemployment. (Typically they must have been actively searching for work in the reference period.) While in a few cases, a high percentage of NEET youth are unemployed, in most cases the opposite is true: for males, most are between about 20 and 60 percent, while for females, most are between about 10 and 40 percent. In other words, the majority of youth who are not employed or in school are either truly idle, or they are engaged in non-labor-force work (which, in some countries, includes the work of military conscripts).

For young men, especially, the percentage NEET is more important than the percentage unemployed, which does not include those too discouraged to search or those queuing for formal-sector jobs. Similarly, for young women, NEET includes those who take on household work while waiting for labor market opportunities. Ideally NEET would exclude those who prefer to specialize in household work, but that information is typically not available.

Figure 9 includes a series of country-specific panels showing the percentages unemployed and NEET by single years of age, separately by sex. In these panels, it becomes clear that unemployment is often a small component of NEET. For young men, the percentage NEET is often shaped like a small hill, rising until the late teens or early twenties, then declining slowing (see Bolivia, Indonesia). In other countries, male NEET barely changes with age (see Mexico, Senegal). For young women, in contrast, the percentage NEET often rises steeply in the mid-to-late teens, then flattens out at a very high level, or continues to grow slightly (see Iran, South Africa).

In many countries, male and female unemployment rates follow very similar patterns as age increases (see Argentina, Ghana), but in a few cases they diverge substantially. Sometimes the male unemployment ratio is lower than the female ratio (see Malawi, South Africa, Indonesia), but there are perhaps even more cases among our examples where the opposite is found (see Mexico, Venezuela, Iran, Jordan, and Senegal). Lower female than male unemployment ratio is likely explained in some cases by young women's withdrawal from an unwelcoming labor market environment – that is, they may have been discouraged from searching for jobs – rather than a higher level of effectiveness in finding jobs.

The relationship between NEET and the unemployment ratio as age increases differs systematically by gender. Consider first the case of young men. In some countries, the

percentage NEET exceeds the percentage unemployed but tracks it fairly closely, with the largest gap between the two usually in the late teens or early twenties. See, for example, Argentina, Mexico, Iran, Jordan, Guinea, Kenya, Senegal, South Africa, Tanzania, Cambodia, Vietnam, and India. In Brazil, the unemployment percentage even exceeds the NEET percentage during the teen years – because young men reported both being unemployed and being enrolled in school. (This is consistent with other evidence from Brazil suggesting that enrollment during the upper teens is sometimes aspirational.) In other countries, there is a large gap – 15 or more percentage points – between the male unemployment ratio and NEET at some ages. See, for example, Bolivia, Colombia, Venezuela, Ghana, Malawi, Uganda, and Indonesia. While it is possible that this gap may be explained by military conscriptions in some of these countries, census documentation makes it clear that conscripts are counted as employed in Venezuela at least (Minnesota Population Center 2011).

Next consider the relationship between NEET and the unemployment ratio by age for young women. In almost every case, there is an initially smaller but eventually very large gap between the percent unemployed and the percent NEET. The differences mainly lie in (1) whether there is much of a gap at age 15, and (2) the level of the NEET line at age 25. For examples of (1), see Argentina, Brazil, and South Africa, where there is little or no gap at age 15, whereas in Colombia, Iran, and Guinea, the gap is in the neighborhood of 20 percentage points at age 15. Regarding (2), percentages in Latin America tend to be between 40 and 60 percent at age 25; percentages in the three Middle East North Africa examples substantially exceed 60 percent; the sub-Saharan African countries vary substantially; and Cambodia and Vietnam are unique not only among the South and Southeast Asian examples but among all the examples presented here: they have female NEET levels at age 25 below 10 percent.

NEET and education. Are more-educated youth less likely to be out of work after they finish school, or do some find themselves with education that was not needed or wanted by local labor markets? The many panels of

Figure 10 provide country-specific examples of NEET levels for youth who completed different levels of education, separately for males and females, by single years of age. Trends for those **completing less than primary** are calculated for ages 15-29, as are trends for those **completing primary**. Trends for those **completing secondary** were calculated for ages 18-29, and trends for those **completing university or above** were calculated for ages 22-29. Trends for females are shown in the left panels, and trends for males are in the right panels. Note that percentage scales may differ between females and males.

The first examples show how percentage NEET changes between age 15 and age 29 for youth in seven Latin American countries, by completed level of education. In Latin America, relative advantage in the labor force seems to be linked very systematically to education: in most of the panels, the "less than primary" trend line lies completely above those for other education levels, for example. Bolivia, in contrast, appears to have some queuing for formal jobs: we see that those with secondary completed have higher levels of NEET than primary school completers until about age 24.

Three examples from the Middle East and North Africa region portray a more complicated story. Among females, all levels of education converge to levels of NEET above 60 percent except for university graduates in Jordan; in Jordan, there is also less convergence and a more clear-cut advantage of human capital in employment. Among males, one pattern that stands out is substantially higher levels of NEET for university graduates until the late 20s, showing that those with higher education prefer to queue in expectation of an eventual formal sector job. Until the late 20s, secondary completers in Jordan have a clear labor force advantage over other educational groups.

In some countries, there is little difference in NEET by education level. This is the case for males in many of the examples from South and South East Asia, although university graduates show some queuing behavior in India. Indian women have increasing levels of NEET with age by all education levels except less-than-primary, reflecting women's withdrawal from the labor force as they marry and have children.

In sub-Saharan Africa, trend lines for university graduates are sometimes erratic, reflecting the very small numbers of highly educated people in most countries. South Africa presents the most dramatic example of the advantages of education, for both females and males: NEET is clearly lower at every age in the 20s, the higher the level of completed education. Some of the African examples also show a different pattern for young women: a pattern of declining NEET with age, rather than increasing NEET related to marriage and child-bearing (see Kenya, Malawi).

NEET over time. Because little attention was paid to the concept of NEET in past decades, it is useful to take a look backwards to consider the percentages of youth who did not report being either employed or in school. **Figure 11** includes a series of figures showing, for nine selected countries with data from two to four decades available via IPUMS-International, trends in NEET from age 15 to age 29. For each country included there is one figure for females and another for males.

The Mexico case shown in **Figure 11** is an example of one fairly typical pattern. NEET has fallen for women over time, such that each age-NEET line lies completely under the one from the previous decade. This pattern reflects the increasing labor force activity of women over time, as well as the greater number of years they are spending in the formal education system. Still, the female patterns show substantially higher levels of NEET than do those of males, reflecting women's continued responsibility for non-labor-force work. Each age-NEET line rises with age

from 15 to 30, since it is during these prime child-bearing years that women are most likely to leave the labor force. Except for the most recent data, from 2000, all the female age-NEET lines begin above 20 percent. In contrast, NEET for Mexican males starts lower – under 20 percent with one exception – and is relatively flat, although after a small rise in the late teens it trends downward slightly. Other countries with similarly shaped age-NEET time trends include Brazil, India, and Senegal.

Egypt depicts a different pattern for young women, although over a shorter time period. For women, there is not a discernible shift in age-NEET patterns over time, except for a downward trend among 15-20 year olds, who are likely to be staying longer in school. For older ages, the NEET trends for 1998, 2006, and 2012 overlie each other substantially. The sharp increase in NEET by age in Egypt reflects the gradual exit from school into non-employment rather than any substantial changes in labor force work. Similarly to those for females, NEET levels among younger male youth in Egypt appear to have declined from 1998 to 2006, again probably reflecting longer schooling durations rather than increases in employment.

The pattern for Indonesia shows some similarities to Mexico as well as some differences. Female NEET rates start high, but age 15 rates have fallen from over 50 percent in 1971 to under 20 percent in 2010. From age 15, in all cross-sections, NEET percentages increase with age, but the 1990 and 2010 percentages plateau below 60 percent, compared to above 60 percent for earlier generations. Male NEET percentages began below 20 percent for 15-year-olds captured by the censuses of 1980, 1990, and 2010, but the 2010 trend is remarkably different than that of 20 or more years earlier. After a similar starting point at age 15, the percentage NEET rises steeply to peak at 32 percent before starting a relatively steep decline that continues into and throughout the 20s. By about age 26 or 27, the 2010 trend line for NEET has merged with those

of earlier decades. Other countries with similar patterns for recent male NEET trends include Malaysia and South Africa.

Labor underutilization

Although NEET provides a fuller measure of employment inadequacy for many youths than does the traditional unemployment measure, it fails to capture the low quality of employment for the majority of youth in poor countries who simply do not have the choice as to whether or not to work. This is especially true in low income economies where work often takes the form of an additional hand on a family farm or marginal activities in the urban informal economy. For males in particular, the need to earn an income to survive and support one's family means that casual or marginal employment is the only option. The situation of young women in poor countries varies a great deal more, depending on how open labor force work is to women in different cultural contexts.

To capture the inadequacy of employment for young people in developing countries, the ILO introduced the notion of labor underutilization and applied it in a series of School-to-Work Transition Surveys (SWTS). Besides the unemployed and inactive youth who are captured in NEET, this notion includes young people in non-standard or irregular employment, which as described above, includes informal wage and salary work, casual day labor and household production activities. The latter category includes self-employed individuals with no employees and contributing family worker. Together these are referred to as "vulnerable employment."

Although it is currently not possible to apply this definition to a broad set of countries due to data limitations, its application to the subset of countries where SWTS surveys have been carried out shows that labor underutilization rates for youth 15 to 29 are extremely high in Sub-Saharan Africa, reaching 79.1 percent in Malawi, 77.5 percent in Liberia and 71.8 percent in Togo (ILO

2013a, p. 133). The main contributor to these high labor underutilization rates were the high rates of vulnerable employment in these countries. Among the SWTS countries in other regions, Cambodia exhibits a very similar pattern to that of the sub-Saharan African countries. Labor underutilization is also high in other developing SWTS countries such as Egypt and Peru (67 percent and 63 percent, respectively) but mostly because of their high rates of irregular/temporary wage employment and relatively high NEET and relaxed unemployment rates.

Faced with poor employment prospects, young men are often forced to find their way in the informal or agrarian economy in low productivity, where a given amount of work is subdivided over a large number of people each of whom produces very little. In some regions, such as sub-Saharan Africa or Southeast Asia, young women face a similar situation and have employment rates in the informal economy that are just as high as those of men. In other regions, less educated women find it much harder to break into the world of work and simply withdraw from labor force work. Many of these young women would undoubtedly be attracted into the workforce if employment opportunities were to materialize, as has in fact happened in Bangladesh's garment industry in recent years.

Labor market mismatch, over-education and under-education

While in theory formal education should increase human capital and thus productivity at the societal level, in practice there are impediments. The curricula taught in schools and universities have historical origins and great inertia; changing what is taught is a slow and laborious process. In many low-income countries, curricula – including which fields of study are considered important – still derive from former colonial powers. At the most basic level, children may be taught to read with, for example, fruit they have never seen ("a is for apple"). At more advanced

levels, manual skills are often disparaged, as are many practical skills such as budgeting. Even when students attend vocational secondary skills, the skills being taught often belong to a previous generation of craftsmanship rather than the skills currently in demand. Thus, in spite of reasonably good formal education, there may be a mismatch between the goals of educators and the needs of employers.

Unfortunately, formal education is often of very poor quality in low-income countries, whose resources have been stretched thin during demographic transition, a time when successive cohorts of children are larger and larger. Building more schools for them is not enough; many more teachers are needed, as well, and training teachers takes time. Typically, education budgets struggle to maintain even very large class sizes, and teacher salaries stagnate or even fall in real terms. When the education that students receive is of low quality, the diplomas that they have been awarded mean little in the labor market. Students *expect* diplomas to have economic value – but they may not. Diplomas of various sorts may not be useful in "signaling" the mastery of particular skills or areas of study, if employers have learned that diploma-holders do not have those skills.

In general, the concept of labor market mismatch is used for situations where new labor market entrants or the unemployed do not have the set of skills needed by employers who are hiring. That is, there is a mismatch between labor supplied and labor demanded. With youth who are entering the labor market for the first time, the mismatch arises from a combination of causes, including (i) they are well-educated/trained but not in the needed areas or skills; (ii) the quality of parts or all of their education was poor. Importantly, youth and their families may not be aware of the deficiencies of their education/training until they attempt to put it to use.

The ILO (2013a, Chapter 3) has attempted to quantify the concept of mismatch. First, they compare the educational attainment of employed vs. unemployed workers, concluding that the highest risk of mismatch is for the least-educated. The idea of measuring a mismatch between supply and demand for skills by comparing the educational qualifications of the employed and the unemployed is, however, seriously flawed. It assumes that the skill composition of employment reflects the current skill requirement of jobs being held (but workers may be overqualified for their jobs); and it assumes that the skill composition of current employment is a good indication of skills demanded in the future. It also assumes that the skilled unemployed are willing to accept the same kinds of jobs being held by the employed; this is particularly problematic in the presence of large informal economies in which unemployment often exists because of queuing for formal sector jobs.

Second, ILO (2013a) considers the degree to which the jobs that youth hold make good use of their education and skills, concluding that youth are far more likely to be "overeducated" and far less likely to be "undereducated" compared to adults over age 29. In addition, they conclude that female, disabled people, and migrants are particularly likely to be mismatched. This analysis classifies the mismatch between skills and knowledge that young people have and those required by their jobs as either vertical (which relates to level of education or qualifications) or horizontal (which relates to the fit or relevance of the field of study for the job), but data (mainly from the OECD) is available only for the latter. Unfortunately the analysis is falsely precise, given that measurement error is large and the assignment of entire ISCO occupation categories to particular levels of education is crude.

Neither analysis is able to capture anything about the quality of a youth's education or about the acquisition of job-related skills outside the formal education system. Krafft (2013), however,

finds that for male youth in Egypt, returns to training outside the educational system exceed returns to completion of vocational secondary school, which is generally held to be low quality. The analyses have omitted potentially important components of mismatch.

Finally, ILO (2013a, p. 33) points out that the unemployment rate and skills mismatch index are not highly correlated; they do not move in tandem because unemployment rates are greatly affected by the macroeconomy. To the extent that unemployment is not a problem, mismatch is often overlooked. When unemployment or underemployment is high, addressing mismatch becomes a way to improve employment challenges.

When labor markets fail youth

One of the main messages of this year's World Bank World Development Report 2013 on Jobs is that jobs are essential to social cohesion. Jobs not only convey a greater sense of dignity and belonging in society, but also encourage voice and participation (World Bank 2012b). The flip side is that a lack of jobs can result in reduced trust and lower levels of civic engagement, and, as recently demonstrated in the Arab Spring, can lead to social unrest and violence. In other contexts, lack of job opportunities for youth are associated with crime and gang-related violence. The motivation to join gangs and other violent groups for unemployed and underemployed young men is not merely economic necessity, but it often stems from the need to compensate for the lack of trust, support, and social ties that exclusion from productive opportunities brings about (Bell and Blanchflower 2010).

The young men with the worst labor market options tend to be those from the most disadvantaged backgrounds, with families that are not prepared to take care of them indefinitely. Relatively more of such young men exist in countries where sex-selective abortion has resulted in substantially lop-sided sex ratios at birth. Youth bulges in those areas are also lop-sided. Such

young men tend to have little education and few skills. They often cannot marry or start a family. In China such men are referred to as "bare branches" of genealogical trees (Hudson & Den Boer 2002, p.11). It is not, perhaps, surprising that some of them turn to theft, banditry, gangs, or political violence.

Consider that a youth sex ratio of 130:100 (for example) implies that out of every 100 young men, only 77 will be able to find a female partner among other youth, even if all the young women agree to marry. About one-third of men, the least marriageable, would be left without what was has been called the civilizing influence of marriage; this effect has more recently been attributed to a decline in serum testosterone linked to courtship and marriage. (Mazur and Michalek 1998 as cited in Hudson and Den Boer 2002). Studies of male group behavior have shown an increase in risky choices related to group dynamics; girls and women learn to avoid street corners where young men loiter. Similarly, the likelihood of organized aggression increases as young men with few options congregate together (Hudson and Den Boer 2002, p.15).

Hudson and Den Boer (2002) argue that the presence of "bare branches" heightens "the opportunity for violence to emerge and become relatively large scale" (p. 15). They and other authors (e.g. Urdal 2006) provide substantial case study and cross-national evidence of security concerns in such situations. When this tendency of unattached men for violent behavior is combined with youth bulges, the possibilities are troubling. Some authors argue forcefully that the presence of large numbers of unemployed or underemployed, poorly educated, unmarried young men, available to be recruited in militias and guerilla groups, is a major risk factor for civil conflict. Cincotta et al (2003), for example, summarize their study based on data from 180 countries, as follows: "the risks of civil conflict… that are generated by demographic factors

may be much more significant that generally recognized, and worthy of more serious consideration by national security policymakers and researchers" (p.12). The two demographic factors they find to be most problematic are a youth bulge and a high rate of urban population growth. Other analysts suggest that population changes – including youth bulges – interact with a variety of other conditions, leading to violent conflicts (Goldstone 2002).

The number of male youth neither in education nor in employment (NEET) provides an estimate of those mostly likely to engage in violent and destabilizing activities, but NEET is both an overestimate and an underestimate. It is an overestimate in that the more privileged among the non-working youth are merely biding their time, waiting for a formal sector position to open; they know they will be able to marry and may be in the process of courtship. It is an underestimate in that many employed young men are serious under-employed, with lots of time on their hands, and possibly little hope of future options.

Disadvantaged youth. Labor markets are most likely to fail youth who fall into particular categories of disadvantage. Categories are to some extent culturally-specific, but there are some categories where disadvantage is global. In particular, youth who are physically and/or mentally disabled face substantial labor market disadvantage. If disabled youth have been unable to access education, then illiteracy may compound their other disadvantages. In many societies, female youth face many labor market disadvantages, compared to males. To the extent that sexuality is disclosed, non-heterosexual youth not only face labor market discrimination but also, sometimes, violence. Youth having darker skin tones are more greatly disadvantaged in most parts of the world. Which ethnic groups – or castes, or tribes – are disadvantaged depends on the region. In some regions, indigenous groups face substantial discrimination. Closely related to ethnicity/caste/tribe is religious affiliation, with region again determining whether Jews or

Muslims, Christians or atheists (for example) are outside mainstream society and facing labor market discrimination. Migrants often fall into multiple disadvantaged groups, particularly if they are refugees from regions of war or civil conflict. Demobilized child soldiers are said to be among the worst off with respect to labor market opportunities (Freedman 2008, p.16).

Sometimes groups that face discrimination can, by (for example) living in the same neighborhoods or villages, create their own internal labor markets in which youth can find employment or create work for themselves via microenterprises. This is generally not possible for groups that cannot segregate themselves: females and disabled family members, for example. Other groups have nomadic cultures that may need to trade with other groups; Roma and many herding tribes are examples, historically. It also does not work with respect to health disadvantages.

Illness and chronic health problems can transform a youth with normal labor market prospects into someone with little energy or ability to find work or create work for himself or herself. Malaria alone affects millions of youth. If most youth in an area are affected, that may limit the degree to which any one youth is put at a disadvantage, but it also limits the returns that can be garnered from any productive activity. Health problems of others also affect youths' prospects. Consider, for example, that among the 33 million people estimated to be infected with the HIV virus, 67 percent are in sub-Saharan Africa (Oster 2010). In many cases, youth are the designed care providers for ill parents, older siblings, or other relatives. Any market work they do must mesh with their care responsibilities.

Categories of disadvantage are highly correlated with dimensions on which we have focused in this report: education, training, and employment. But disadvantaged populations are also vulnerable to work-related problems that we have not yet discussed. These concern illicit

activities: forced labor; the trafficking of youth for a particular kind of forced or coercive labor, namely prostitution or pornography; drug running and other activities related to illegal drugs; and so forth. Disabled youth may be forced to beg in order to make a living for themselves and their families. Traditional measures of employment inadequacy do not reveal many of the dimensions employment disadvantage faced by the youth discussed in this section.

POTENTIAL SOLUTIONS

There is little doubt that a necessary condition for addressing the youth employment challenge is to foster a dynamic economic environment in which economies can thrive and economic growth can lead to continuous growth in labor demand. While this depends in part on the overall health of the global economy and the external economic environment that countries are facing, it also depends on the pursuit of sound economic policies, what the World Development Report 2013 calls "the fundamentals." What these fundamentals consist of is fairly predictable: macroeconomic stability, good governance and the rule of law, respect for rights, a healthy investment climate and sound investments in human capital, including education and health (World Bank 2012b, Ch. 9). While policies to establish such sound fundamentals are an essential component of a youth employment strategy, they are generally beyond the scope of this paper.

Besides the fundamentals, labor market policies and institutions can potentially have important effects on youth employment and earnings. These policies include those that protect jobs or workers, set minimum levels of compensation, regulate working conditions and hours, provide social insurance, and set a framework for representation and collective bargaining. Although sometimes governed by international agreements and conventions, these policies and institutions vary a great deal across countries. After a great deal of debate about the potential tradeoffs

between employment protection legislation (EPL) and the rate of job creation and wage growth, a consensus appears to be emerging from a large number of empirical studies that the effects of labor regulations on the overall level of employment and wages is modest so long as the degree of protection is within a fairly broad "plateau" (World Bank 2012b, Ch. 8). There is some evidence, however, that EPL has dynamic effects on the labor markets, such as a reduction of gross labor market flows and a lengthening of the durations of both employment and unemployment (Ibid.). There is some evidence however that these regulations affect youth disproportionately. A study of several Latin America and OECD countries showed that the impact of EPL on young people's employment was more than twice their impact on the employment of prime age males (Heckman and Pagés 2000).

The weak impact of EPL on employment and wages may be the result of the large role informality plays in the labor markets of most developing countries. When rules are poorly enforced or have limited coverage, the main impact is often informalization rather than dis-employment. It does suggest, however, that the presence of strict job security rules, or other rules that increase the cost of formal hiring, will tend to relegate vulnerable groups such as women and youth to informal or more precarious forms of employment. As a result, the rules have a redistributive effect often to the detriment of youth. In any case, there is little evidence that major programs to deregulate labor markets and weaken job security regulations and worker protections could by themselves significantly increase the level and adequacy of employment for young people, other than in a few exceptional cases where regulations are especially onerous (World Bank 2012b).

Beyond the fundamentals and traditional labor policies, an area that has attracted a great deal of attention in recent years is that of youth-targeted programs to better prepare young people for the

labor market and facilitate labor market entry. While some of these efforts take place within education systems to increase the relevance of education to the world of work, many are directed at school leavers to facilitate their transition into the labor market; these fall under the general rubric of active labor market programs (ALMPs).

Building Skills and Preparing Young People for the Labor Market

Any effort to prepare youth for productive careers must start with broad-based, high quality general education. There are frequent complaints from employers that workers with six or even nine years of education often lack the most basic literacy, numeracy and comprehension skills. The expansion of education systems around the world has often come at the expense of quality. The Education for All Global Monitoring Report of 2012 estimates that as many as 250 million children are failing to read and write by the time they reach grade 4 (UNESCO 2012). The report also states that the international community has failed to agree on a coherent set of internationally comparable indicators to assess equitable access to learning and life skills, which is the core of Goal 3 of the Education for All goals established in 2000 in Dakar, Senegal. When education fails to equip young people with even the most basic literacy and numeracy skills but raises their expectations with regards to the kind of job they can obtain, it simply leads to frustration and disillusionment, in addition to wasted public and private resources.

Beyond good quality basic education, education systems must provide opportunities for technical and vocational education that imparts skills that are relevant to the labor market. Technical or vocational education tracks in many contexts are often no more than inferior education tracks designed to divert students away from universities and other higher education institutions (Antoninis 2001). Newhouse and Suryadarma (2009) examined labor market outcomes for

Indonesian youth in different types of secondary education after the Indonesian government decided to dramatically expand enrollment to vocational education. Although they found that vocational school graduates fared just as well in the labor market as general school graduates despite being from more disadvantaged backgrounds, they also found that returns to vocational schooling have dropped steeply in Indonesia for the most recent cohort of men. They conclude that this raises serious questions about current efforts to expand vocational education in an increasingly service-oriented economy.

Dual Education Model. One of the ways the ILO has sought to build bridges between education and the world of work is by promoting "dual-system education strategies", which combine school-based education with apprenticeships and on-the-job experience. This model, which has proven effective in Austria, Denmark, Germany and Switzerland, provides large numbers of young people with quality education and training in recognized qualifications demanded by firms. The involvement of social partners in program design and implementation ensures that apprenticeship programs meet labor market requirements. The German system includes several key features: (i) the content of enterprise-based training is determined jointly by representatives from government, employers' organizations and trade unions, (ii) individual firms choose their own training methods, (iii) training costs are shared between the government and the employers (government typically covers the school-based component and employers finance the enterprise-based training, (iv) conditions under which apprenticeships take place are determined through collective agreements specifying the minimum apprentice wage, (v) qualifications are awarded upon completion of written and practical examines, set and marked by tripartite external examiners, (vi) competent bodies (e.g. chambers of commerce and industry or trade associations) issue certificates that are recognized throughout the country (ILO 2013a).

In low-income countries, informal apprenticeships are often the path to job skills for some youth who drop out early from school, especially boys. While apprenticeships have served this purpose for centuries, they have disadvantages in a world where literacy is important and laws require children to attend school to a certain level or age. Combining apprenticeships with opportunities to continue education, even if it is outside formal schooling systems, could mitigate some of the disadvantages of early school leaving to become an apprentice while maintaining the important role of apprenticeships in imparting useful trade skills.

Reforming Child Labor Policies. One policy domain where reforms can potentially ease young people's transition to employment is in the area of policies to combat child labor. As an ILO document points out, "[t]he overlap between definitions of childhood (below 18 years) and youth (ages 15-24) points to the difficulties that arise when trying to draw a distinct line between when childhood ends and when youth begins" (ILO 2008: 16). In spite of the great concern about youth unemployment and its long-term negative effects on youth, few authors make the obvious connection to child labor policy. Although some ILO conventions aim to forbid children under 14 (or 13) access to labor force work, the 1990 U.N. Convention on the Rights of the Child (CRC) instead recognizes "the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development" (Article 32). In agreement with the CRC, Bourdillon et al (2010) argue that in many cases, it is better – from a child development perspective – to ameliorate hazardous conditions of employment rather than to absolutely deny children the right to work. Figuring out non-hazardous ways that children could begin to take on small amounts of work from a relatively

early age (say, 10) could help them slowly integrate into the economic structures of their communities as they gain age, experience, and skills.

Second Chance Programs. The World Bank World Development Report of 2007, which focused on youth, highlighted the importance of second chance programs for young people who missed out on the opportunity to build their human capital prior to or during adolescence (World Bank 2006). These second-chance programs may consist of adult literacy programs, apprenticeships, life skills training, drug rehabilitation, retraining programs for school dropouts, or demobilization programs after civil wars. There are a number of such second chance programs that have been targeted to out-of-school adolescent girls in poor countries. Even if these programs do not lead to eventual participation in labor markets, they provide essential literacy and life skills for these girls to remain healthy, build social networks, marry at a healthy age and have fewer and healthier children (Lloyd and Young 2009).

Active Labor Market Programs (ALMPs).

ALMPs refer to a variety of strategies that may be targeted at particular groups – such as youth – to increase their employability and their likelihood of employment (or work engagement). Our discussion of ALMPs will pay particular attention to evaluations of their employment and earnings impacts and their cost-effectiveness.[6] While most ALMPs are designed and evaluated as micro-economic interventions, the ILO (2012) argues that they also have macro-economic impacts. The jobs created through ALMPs, and attendant increased income for youth, can spur

[6] A summary of selected published evaluations of ALMPs is shown in

Table 2.

demand overall. ALMPs can also act as interventions to prevent anti-social behavior in unemployed youth (ILO 2012).

Job search assistance and job clubs. ALMPs that are commonly used in high-income and transitioning economies are job search assistance programs and job clubs. These aim to connect employers searching for workers with youth searching for jobs. At this point there is limited evidence about the effectiveness of this kind of intervention from low-income countries, meaning that most of the findings that follow come from middle- and high-income countries (Betcherman, Olivas and Dar 2004). Results on how effective such programs are in highly informal labor markets are simply not available (Martin and Grubb 2001). The general finding from evaluations show that the two most notable impacts for participants are an increased chance of employment and a shorter average time between jobs, but there is little evidence of impact on long-term earnings (Betcherman, Olivas and Dar 2004; Kuddo 2009). Job search programs are only effective when jobs exist. They are of little use during market downturns or times of mass unemployment, when employers have their pick of many applicants (Kuddo 2009). In general, programmatic success rests on the job placers' ability to meet employers' needs. Combining search centers with internet listings and cellphone outreach are promising avenues for reaching the most disadvantaged youth (Kuddo 2009). Because they are relatively low-cost interventions, job search assistance programs generally have positive cost-benefit ratios (Martin and Grubb 2001; Kuddo 2009).

Job clubs are a low-cost ancillary to formal job search assistance programs that can be especially helpful for youth. Job clubs are regular meetings of the unemployed to share information on the job markets and to share experiences. The mutual aid aspects keep morale high, which helps with program retention (Kuddo 2009).

Job skills training. Jobs skills training programs are the most popular ALMPs in low-income countries, but they are often ill-suited for youth. For example, job skills programs make up 93 percent of all current ALMP programs in the Arab-Mediterranean countries (Angel-Urdinola et al 2010) but recent policy reviews have shown that in Latin America they have had limited to no impact on subsequent employability for youth (Card 2007). The marginal skills offered by short-term training programs are unable to compensate up for years of sub-standard schooling. The ILO is adamant about the need for increased investments in quality education (ILO 2013a) and scholars have found that early and sustained investment in education will have greater impacts on first-time workers (Betcherman, Olivas and Dar 2004). However, there has been little communication between program designers about best practices, leading some authors to call urgent reforms to program design and delivery (Angel-Urdinola et al 2010).

Adult men and women can have positive outcomes from job skills training, and the design successes for these populations may be adaptable to youth. Small-scale and targeted programs that coordinate closely with employers have the best outcomes (Kuddo 2009). Similarly, on-the-job training and pathways towards employment are always more effective than classroom work (Kuddo 2009). The success or failure of training programs rests heavily on the existing labor market (Attanasio, Kugler and Meghir 2011; Rodriguez-Planas 2010). Programs are most effective when formal jobs are available for low-skill and entry-level work. Because of this, large-scale programs, or programs that respond to mass layoff or other shocks, are generally ineffective (Kuddo 2009).

Public employment and public works projects. Expanded public employment rolls or labor-intensive public works projects are good for short-term job creation, or acting as a safety net for the most disadvantaged, but they are inappropriate for combating long-term unemployment

(Kuddo 2009; Betcherman, Olivas and Dar 2004; Kluve, Lehman and Schmidt 2008; Rodriguez-Planas 2010).

Jobs created by public works projects can help workers wait out the bad times, and they can even act as counter-cyclical public investments to kick-start a recovery. The most positive long-term impact of public works is the creation of a safety net for the most disadvantaged workers (Kuddo 2009). The ILO cautions that young workers may get caught in the carousel of public works programs and have few opportunities to transition to the broader labor marker (ILO 2013a). Participation in a public works program has been found to have insignificant or even slightly negative effects on post-project employment (Betcherman, Olivas and Dar 2004). In Romania, extended public works projects hurt workers' prospects for employment in the post-transition economy because it "brought work to the workers," forestalling retraining or relocation (Rodriguez-Planas and Benus 2010). Similarly, public works employment in Poland encouraged "benefit churning" (Kluve, Lehman and Schmidt 1999). These are clearly potential down-sides to such projects aside from their expense.

In low-income countries, potential benefits may be related to "soft" skills: timeliness, interacting with employers and co-workers, and expectations in general. To the extent that public works projects keep young men who might otherwise engage in anti-social behavior busy, they have substantial externalities. If they target particularly disadvantaged youth, such as those with disabilities, they may help to overcome social barriers to the employability of these young people. To conclude, public works employment should be targeted only at the most disadvantaged. While these jobs offer much-needed income for some, easy-to-access but short-term employment can be counterproductive for workers with access to good job search channels (Rodriguez-Planas 2010).

Entrepreneurship training and small business assistance. There is some evidence that entrepreneurship training and small business assistance are effective programs for older and better educated workers, but even on that count, the evidence remains fairly weak (McKenzie and Woodruff 2012). Older individuals are able to use their existing knowledge of local markets to plan their entrepreneurial ventures, and better-educated workers are capable of handling the accounting necessary to run a small business. The only study we found that has rigorously evaluated the effectiveness of entrepreneurship training targeted at youth was of a program directed at undergraduate students in Tunisian universities (Premand et al. 2012). The program was shown to increase self-employment among graduates, but only slightly, and also had positive effects on job skills, business knowledge and optimism. However, the program had no impact on overall employment.

Entrepreneurship training generally targets a small segment of the unemployed population – usually educated men who are in their thirties or older (Martin and Grubb 2001; Kuddo 2009; Rordriguez-Planas 2010). Program reviews have found a positive impact for workers of this demographic, although the take-up is low (Betcherman, Olivas and Dar 2004). The most effective programs include multiple components: initial loans, entrepreneurship training, and sustained technical and advisory assistance (Martin and Grubb 2001). The ILO cautions that high failure rates may have long-term consequences for enrollees (ILO 2013a).

Entrepreneurship training may not be cost-effective approach to reducing overall unemployment. The new businesses are able to provide employment for graduates of training programs but do not generate many jobs for others.

Wage subsidies. Wage subsidies or tax credits to employers are effective in increasing employment levels when specifically targeted. Target groups are slightly more likely to be hired

by employers. Subsidies that are applicable to the informal sector have more of an impact for youth and women. For example, the *Proempleo* Experiment in Argentina provided a voucher to both formal and informal employers who hired within the target group. Women, youth and the better-educated gained the most from this program, but most of the hiring was for unskilled labor in the informal sector. When skills training was coupled with the vouchers, it had no additional statistically significant effect (Galasso, Ravallion and Salvia 2004).

In transition economies, the most notable impact of vouchers was to increase formalization of employment and increase the numbers of jobs paying into the social security system (Betcherman, Daysal and Pages 2010). The vouchers provide incentives for employers to enter formal registration, especially in countries with weak enforcement mechanisms and high payroll taxes (Betcherman, Daysal and Pages 2010).

Wage subsidy programs are difficult to design and implement because employers are apt to abuse the vouchers by making fake hires (Kuddo 2009). Increased scrutiny both increases the cost of the programs and reduces uptake (Betcherman, Olivas and Dar 2004). There is an additional risk of stigmatizing the targeted groups (Katz 1996).

In an interesting variation on wage subsidies, a recent large-scale development program in Uganda simply provides unconditional and unsupervised cash transfers to thousands of young people to finance vocational training or to cover the cost of tools and other business start-up costs. A randomized of evaluation of this program shows large employment and earnings impacts: non-household employment doubles and cash earnings increase by 50 percent relative to a control group (Blattman, Fiala and Martinez 2011). These findings are still preliminary, however, and further research is needed to understand the pathways through which such large benefits are obtained.

ALMPs: A Synopsis. ALMPs have proved to be moderately effective at assisting youth in obtaining first-time employment and improving the efficiency of job matching. They can sometimes overcome employers' reluctance to provide training to workers whose retention they cannot guarantee. They are also effective in reducing the adverse impact of economic downturns on vulnerable groups. Job search assistance has proven to be the most cost-effective among ALMPs for disadvantaged youth. On-going advising and job clubs are relatively low-cost interventions that can positive effects on job matching, but they may be less effective in low-income settings where labor markets are mostly informal. Wage subsidies can be effective in bringing disadvantaged youth into waged employment, especially when such programs target both the formal and informal segments of the economy. By reducing employers' initial hiring and training costs, wage subsidies are able to reach hard-to-employ groups such as youth and women.

Job skills training programs can also be moderately effective, but only when coordinated with employers. Coordinated programs match skills with labor market demands, easing youth's transition into work. Labor-intensive public works programs are effective counter-cycle policies but they have little impact on long-term unemployment of youth. Lastly, entrepreneurship programs are expensive and have little impact for disadvantaged youth. Only relatively older and better-educated youth are able to take advantage of the opportunities provided, and the businesses created by the youth do not create large numbers of jobs for others.

CONCLUSION

We argue in this paper that all the developing regions of the world experienced at some point in the past two decades strong demographic pressures on their labor markets resulting from the

youth bulge phenomenon. While the timing of the youth bulge differed by region, it caused rapid increases in youth populations almost everywhere in the developing world. The effect of this rapid increase in labor supply varied considerably across regions depending on each region's ability to capitalize on these human resources by investing in human capital and then putting this human capital to use in productive endeavors. East Asia, one of the earlier regions in the developing world to experience the youth bulge phenomenon, invested heavily and equitably in education and managed to sustain a virtuous cycle of rising labor demand and supply by pursuing policies of export-driven growth. Because of the one child policy in China and the very rapid fall in fertility, the share of youth in the population there fell precipitously in the 1990s, allowing for further deepening of investments in human capital. However, the interaction of the one-child policy and the strong son preference of Chinese families led to another worrisome demographic imbalance, namely highly unbalanced sex ratios resulting from sex selective abortions. Gender imbalances will continue to rise in East Asia at least until 2025 increasing the threat of crime and civil unrest related to the unemployment and social alienation of the most disadvantaged young men.

Southeast Asia and Latin America also had a relatively early onset of the youth bulge, but a much slower deceleration of the youth population than in East Asia. The absolute size of the youth population in both these regions has already peaked and will begin to decline slowly by 2020. Despite subsiding demographic pressures, these regions' formalizing economies mean that young people have an incentive to remain unemployed while searching for suitable formal jobs and, as a result, the two regions have intermediate youth unemployment rates that the ILO projects will be rising steadily in the upcoming five years. A broader measure of employment inadequacy among youth, the NEET percentage, shows that youth employment rates have been

rising in these two regions among young women and are fairly stable or slightly declining among young men.

South Asia is by now the world's largest region in terms of the number of youth, and the size of its youth population will keep growing, albeit fairly slowly, up to 2030. South Asia experienced a somewhat more varied demographic and economic trajectory than other world regions. India's mode of insertion into the global economy through service exports placed a high premium on education among its growing youth population. This has likely contributed to a bifurcation between the fortunes of educated youth who can participate in these globalized sectors and those with lower levels of education, who are relegated to marginal activities in India's sprawling informal economy. Bangladesh's insertion in global supply chains in the garment industry has created new opportunities for rural youth, especially young women. This has in turn increased the incentives of parents to invest in girls' education in rural areas (World Bank 2012b). Hampered by internal conflict and political instability, Pakistan and Afghanistan are well behind in terms of both their demographic transitions and their economic transformations.

The Middle East and North region experienced a combination of a significant youth bulge coupled with rapidly rising educational attainment. However, its educational systems, accustomed to meeting the needs of oversized bureaucracies rather than globalizing private sectors, are not equipping youth with the skills they need to succeed in a competitive global economy. High expectations on the part of educated youth coupled with shrinking public sector growth resulted in long periods of queuing for public sector jobs and one of the highest youth unemployment rates in the world. The frustration they experienced is undoubtedly one of the

primary driving forces behind the Arab Spring, but unfortunately, the events of the Arab Spring only served to push youth unemployment rates even higher.

Sub-Saharan Africa is the only region in the world where demographic pressures on labor markets caused by the youth bulge will continue to intensify in the foreseeable future. The slow fertility decline in much of sub-Saharan Africa, and the resultant prolongation of the demographic transition, mean that the youth population in Africa will continue to grow rapidly through 2050 and beyond. Because of the agrarian and informal nature of African labor markets, these severe demographic pressures do not translate into high open unemployment rates for youth. The exception that proves the rule there is South Africa, which has a highly formalized economy, and, as a consequence high youth unemployment rates. In much of the rest of Sub-Saharan Africa, employment inadequacy for youth shows up in high rates of low-productivity vulnerable employment in agriculture and in urban livelihood activities, where a given level of economic activity is subdivided across a growing number of workers. Combined with growing environmental threats, such as droughts and desertification, this dynamic, if not reversed through concerted action, is likely to result in more frequent eruptions of violence and civil conflict.

To better capture the youth employment challenges that regions like sub-Saharan will be experiencing for the foreseeable future, it is necessary to develop measures of employment inadequacy that go well beyond the youth unemployment rate, which is better suited to economies with highly organized, mostly formal labor markets. The NEET percentage is a measure that moves in that direction but is still incapable of capturing the inadequacy of employment among those who have no choice but to engage in some sort of livelihood activity in order to survive. The labor underutilization measure is another attempt in the right direction, but

it too only crudely captures the marginality of employment and the adequacy of the earnings it generates.

Potential solutions to address the growing employment challenges faced by youth lie first and foremost in establishing the conditions for growing and dynamic economies that can compete in an increasingly globalized world economy. In the presence of adequate labor demand, the next step is to ensure that young people are equipped with the right sets of skills to participate productively in the growth process and to improve the match between their individual skills and those demanded in the labor market. The importance of high quality basic education imparting good literacy, numeracy and comprehension skills cannot be overestimated. Education and training systems need to go further and equip youth with general employability skills such analytical thinking, problem solving, creativity, and communications skills. Training in specific technical skills should be planned and carried out in close collaboration with employers and trade associations, even though financing will probably need come from public sources. The gradual integration of youth into the workforce during the education and training phase, for example through internships and apprenticeship programs, in a much wider range of employment settings can go a long way in facilitating the transition from school to work. Active labor market policies have a role to play in helping young people transition to the labor market by improving information flows and lowering the cost of hiring and initial on-the-job training.

Table 2. Summary of Selected Published Evaluations of Active Labor Market Programs

Select Published Evaluations of ALMPs					
Author and Year	Country	Intervention	Methodology of Evaluation	Advantages	Disadvantages
Katz (1996)	U.S.A	Wage Subsidies		Modestly raise demand for labor of disadvantaged groups.	Highly targeted programs have low take-up and may stigmatize target groups.
Kluve, Lehman and Schmidt (1999)	Poland	Job Training and Public Works	Difference-in-Difference	Job training has positive impacts for both men and women.	Public works has negative post-enrollment impact on men, due to stigmatization and benefit churning.
Galasso, Ravallion and Salvia (2004)	Argentina	Wage Subsidies (voucher to employers) and Job Training	Experimental design: randomized by control, voucher recipient and job training recipients	Employment gains from vouchers are in the informal sector for youth, women and more educated workers.	Low level of take-up. No impact found for job training.
Card et al. (2007)	Dominican Republic	Job Skills Training, youth		Marginally significant impact on hourly wages, and health insurance coverage	No significant impact on subsequent employability.
Betcherman, Daysal and Pages (2010)	Turkey	Wage Subsidies	Difference-In-Difference	Increased social security registration	Little impact on total employment or economic

				of firms and workers.	activity
Rodriguez-Planas (2010)	Romania	Public Employment, Small Business Assistance	Follow-up surveys and propensity score matching	Small Business Assistance creates employment in the secondary labor market, and more appropriate for more educated workers. Less educated workers are better suited for public works.	Public Employment should not be offered to workers with access to informal job networks.
Angel-Urdinola et al (2010)	Arab-Mediterranean Countries	Jobs Skills Training, youth	Meta Analysis	Successful when paired with private companies to match labor market demands.	Too much focus hard-skills and in-class training, which lacks on-the-job experience. Without active targets, de facto targets are middle class men
Rodriguez-Planas and Benus (2010)	Romania	Training/retraining, Self-employment assistance, Job relocation assistance, Public employment	Follow-up surveys and propensity score matching	Training, Self-Employment and job location assistance have positive effects.	All programs found to be "creaming off" the best workers. Public works hurt job prospects after the project is finished, due to 'brining

					work to the workers'.
Attanasio, Kugler and Meghir (2011)	Columbia	Vocational Training	Randomized Trial	Women see higher earnings, while men move into the formal sector. Cost-effective for middle income countries in cooperation with private companies to meet labor market needs.	
Premand et al. (2012)	Tunisia	Entrepreneurship training in last year of undergraduate education	Randomized Trial	Increased self-employment, business knowledge and optimism	No increase in employment, probably subtracting paid employment to self-employment

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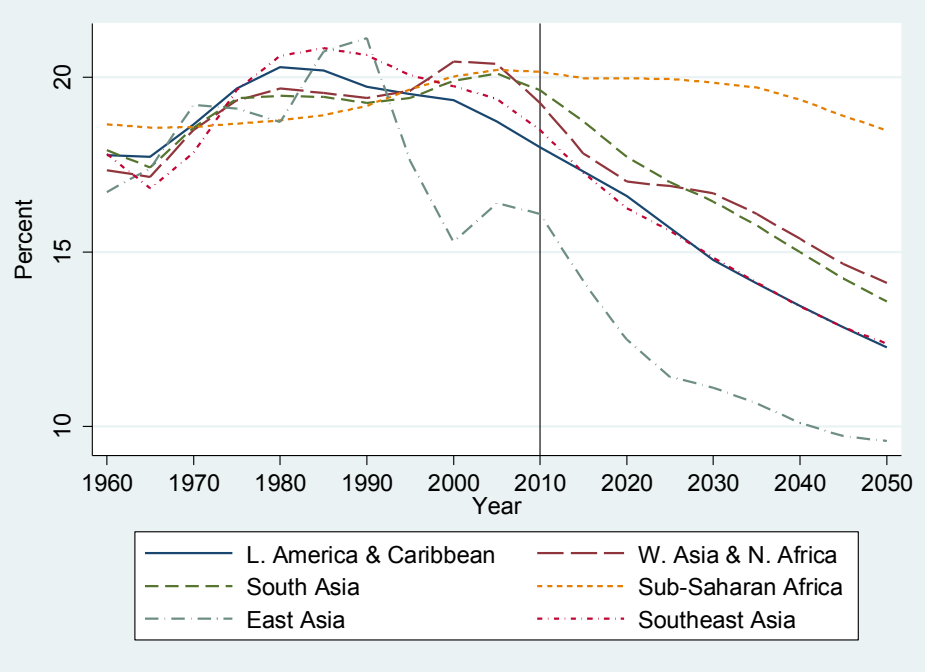
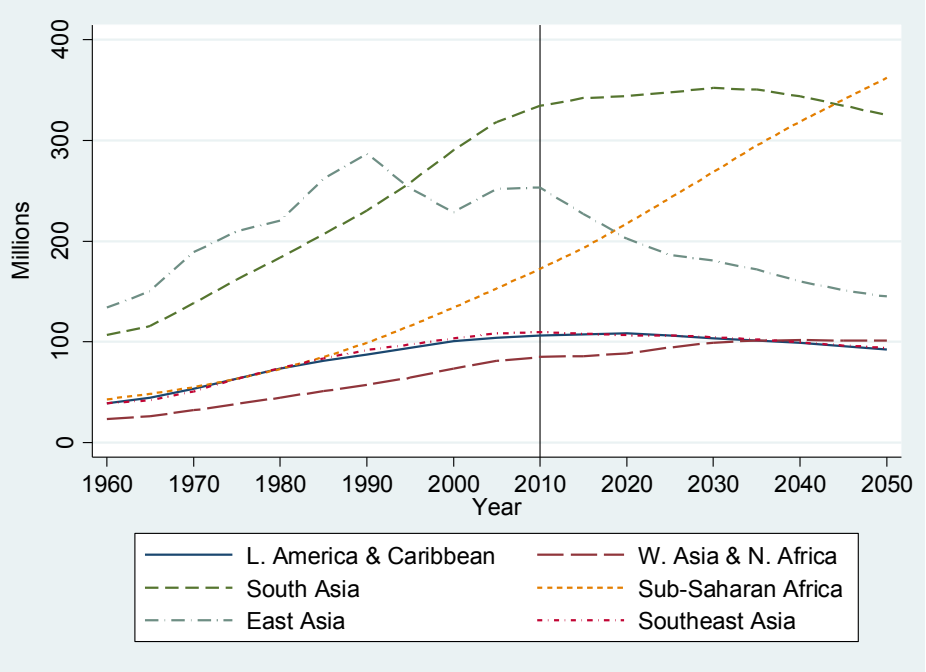
Figure 1. Youth (15-24) as a Percentage of Total Population by Region



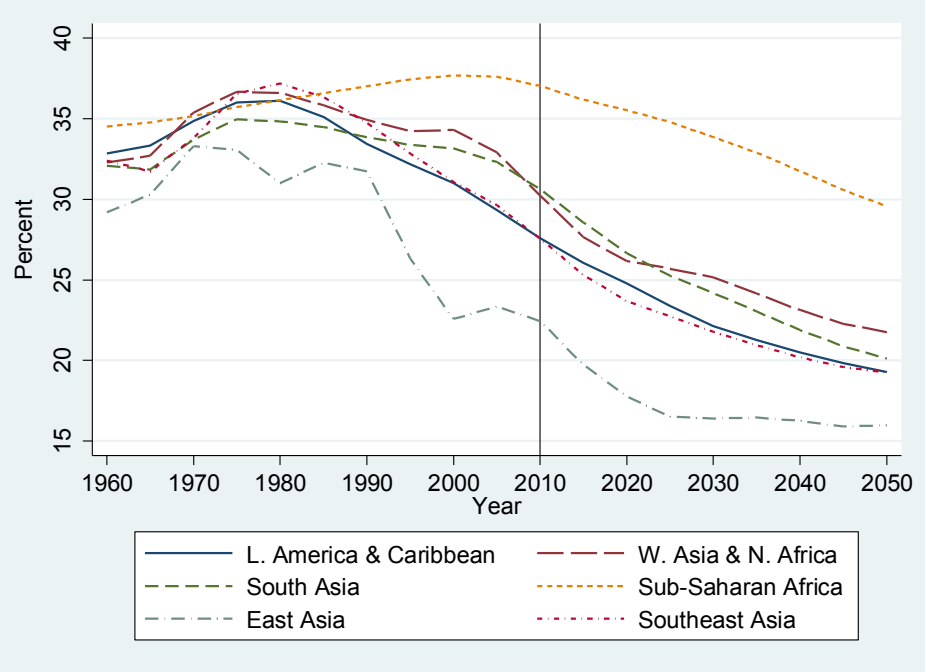
Source: UN (2011).

Figure 2. Size of the Youth Population (15-24) by Region, Millions



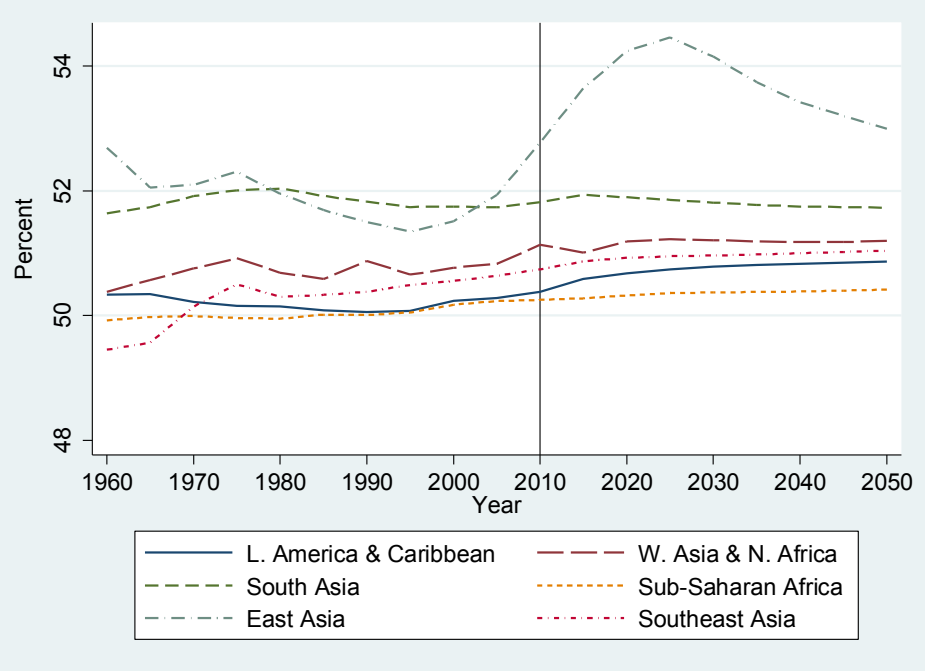
Source: Authors' calculations using UN (2011).

Figure 3. Youth (15-24) as a Percentage of Working age Population (15-64) by Region



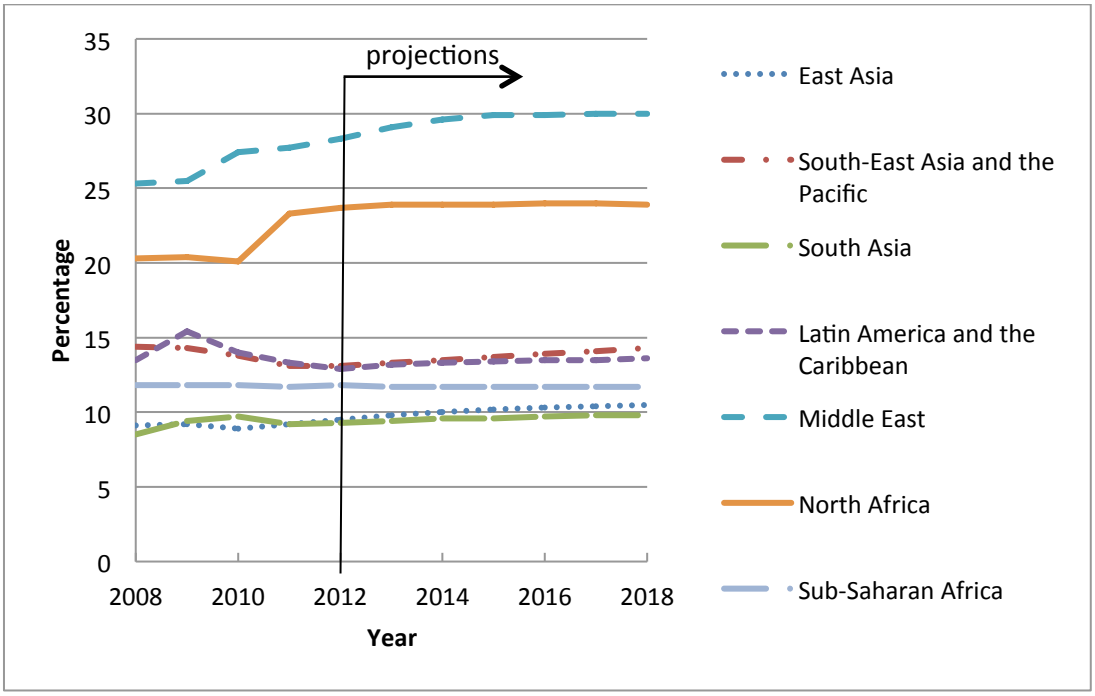
Source: Authors' calculations using UN (2011).

Figure 4. Males as a Percent of All Youth (15-24) by Region



Source: Authors' calculations using UN (2011).

Figure 5. Youth Unemployment Rates by Region, Ages 15-24



Source: ILO (2013)

Figure 6. Percentage NEET by Sex, Youths 15-24, Selected Countries

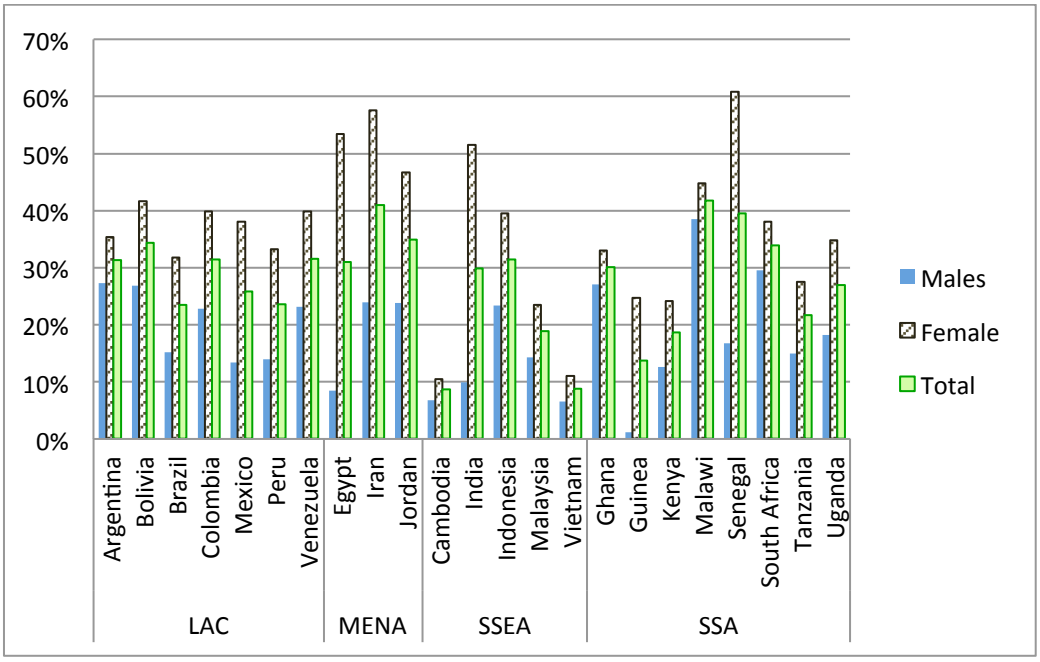
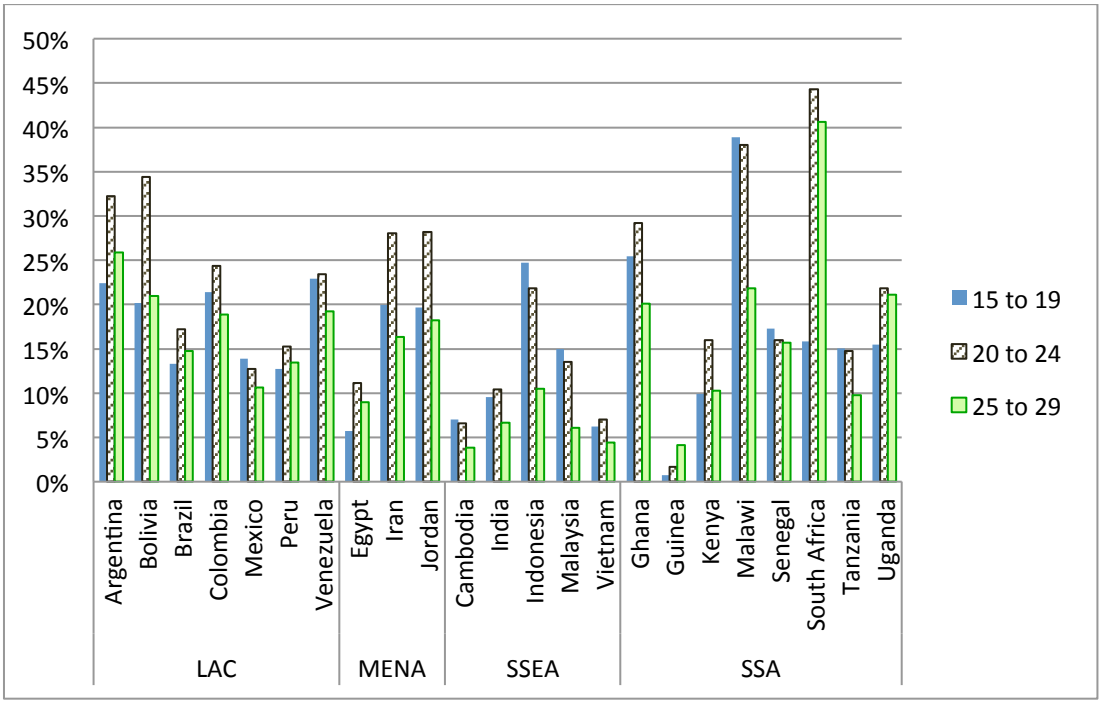


Figure 7. Percentage NEET by Age Group, Youths 15-29, Selected Countries

A. Males



B. Females

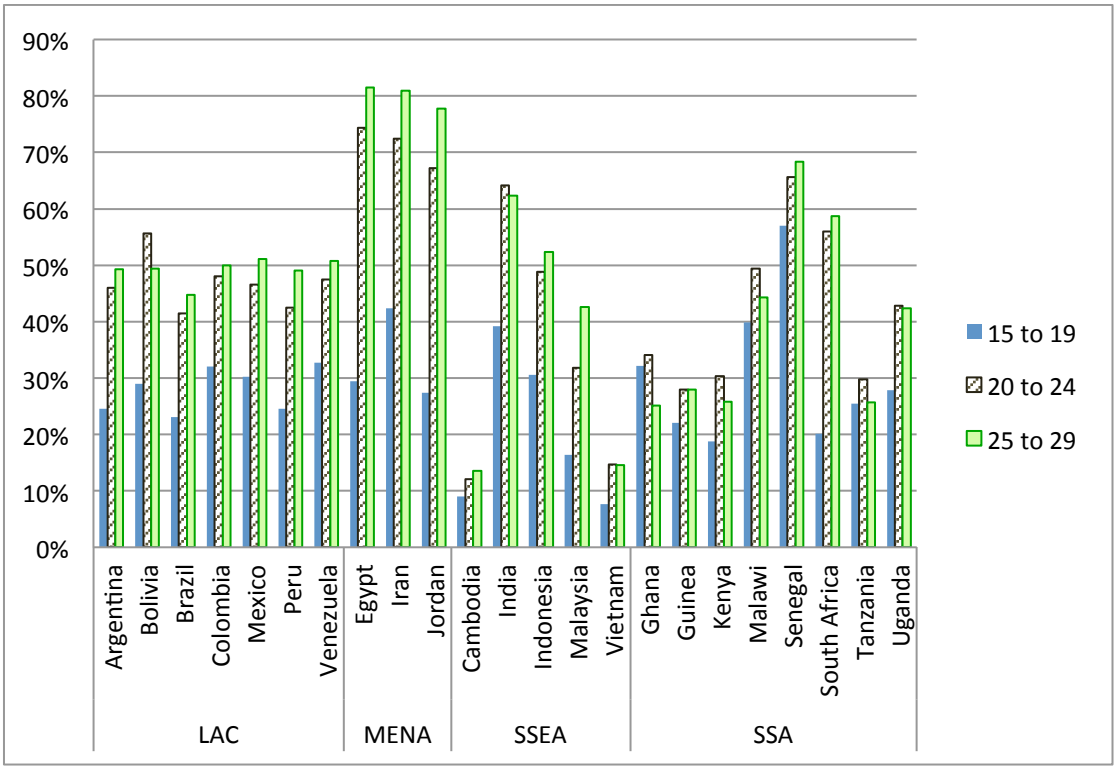


Figure 8. Percentage Unemployed among NEET, Youths 15-24, Selected Countries

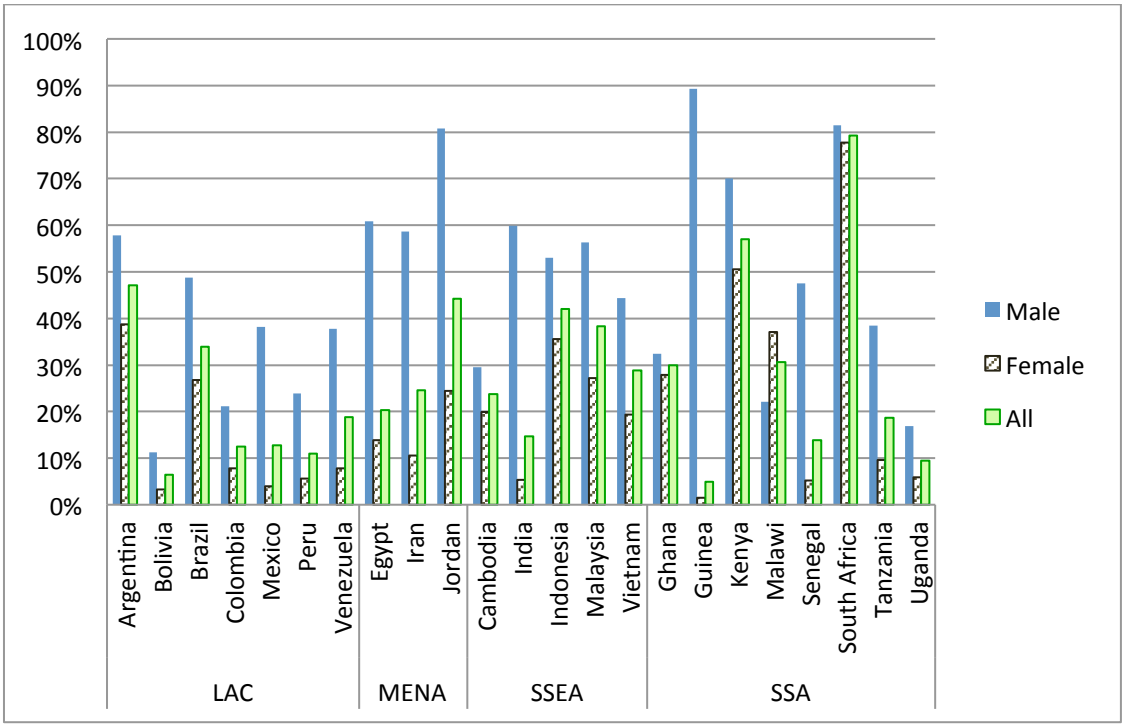
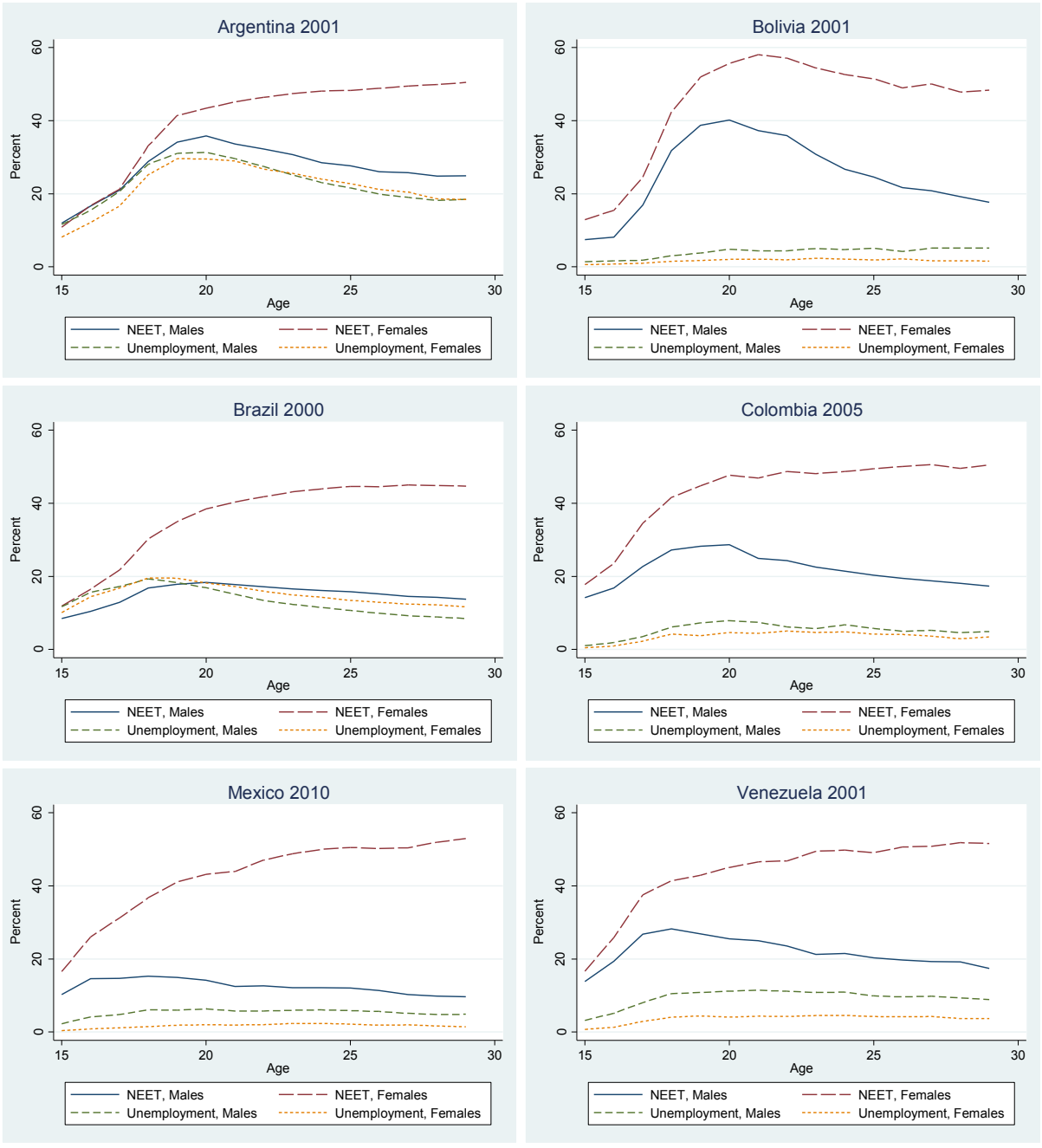
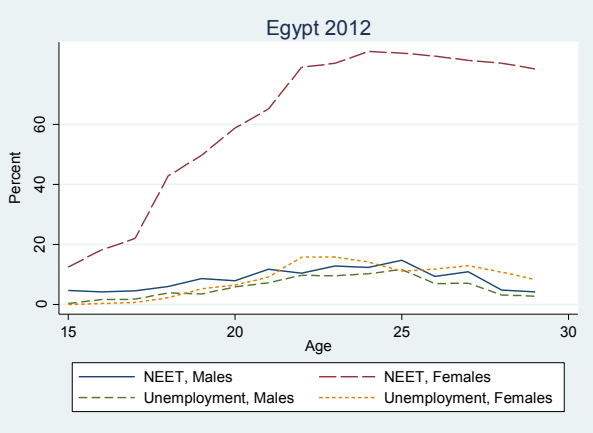


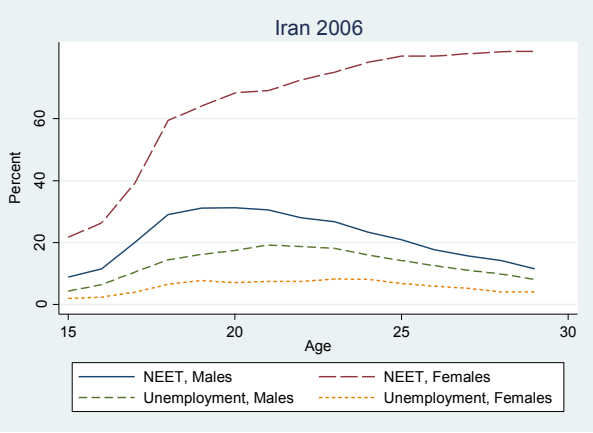
Figure 9. NEET and Unemployment Rate by Single Year of Age and Sex, Selected Countries, Latest Year

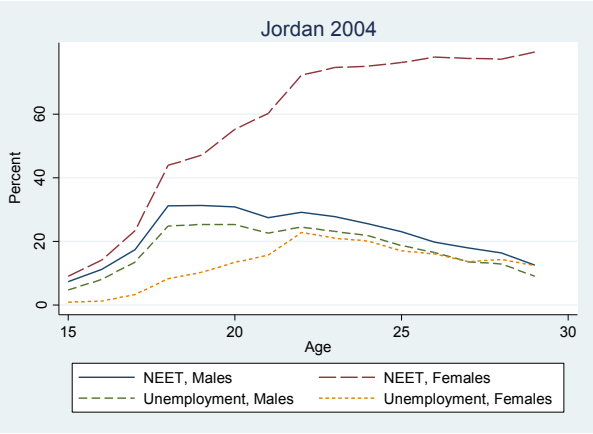
A. Latin America



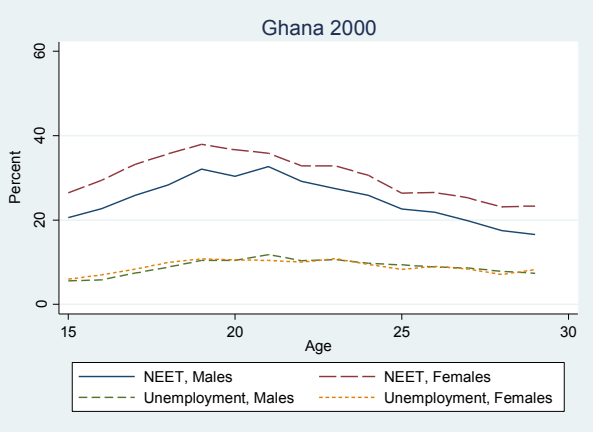
B. Middle East and North Africa

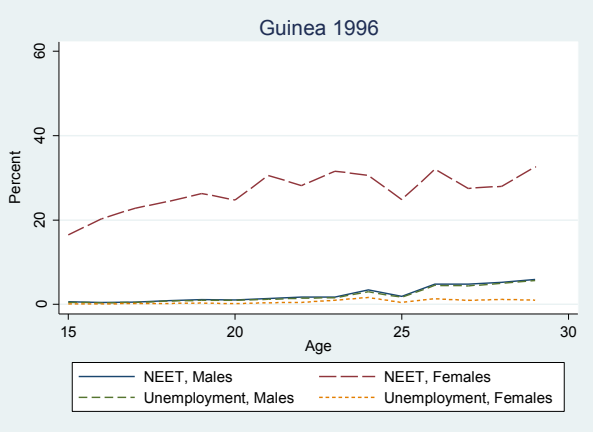


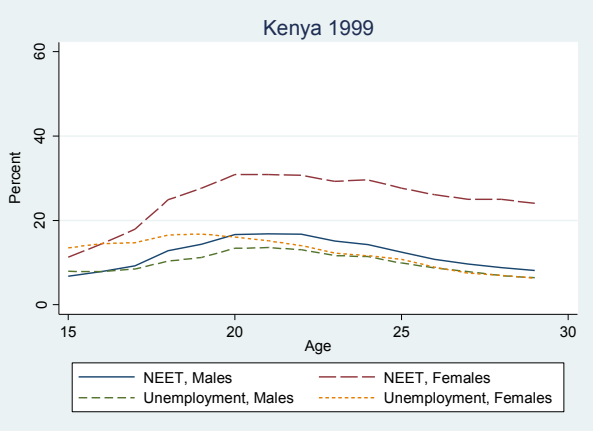


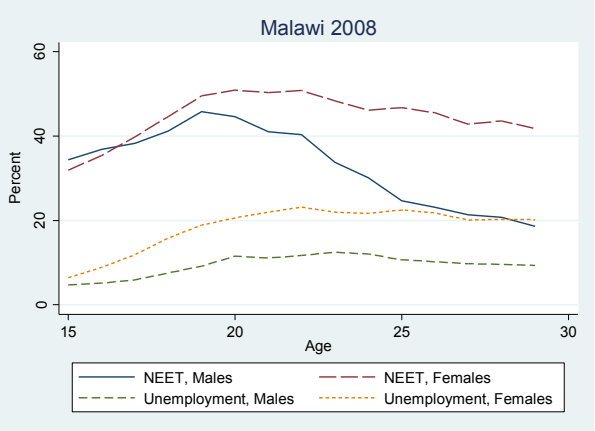


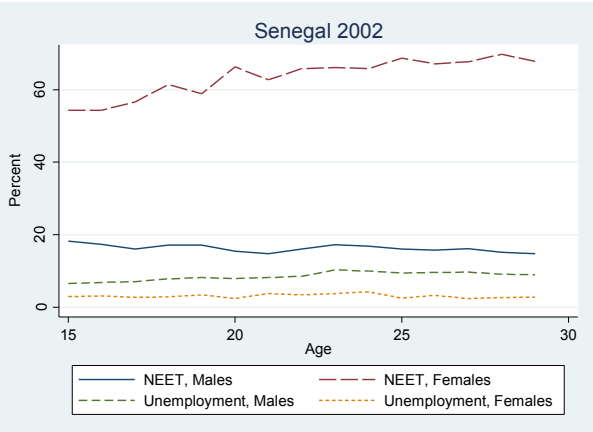
C. Sub-Saharan Africa

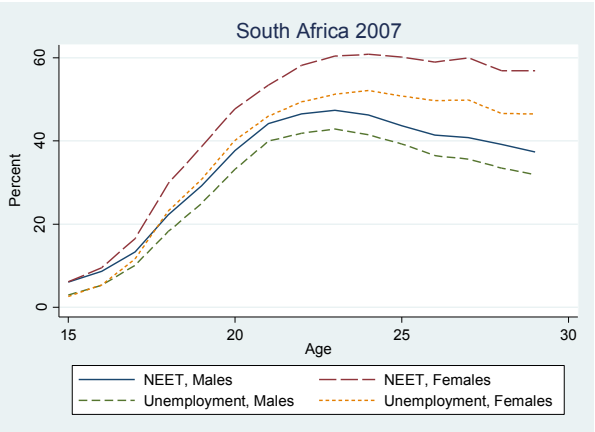


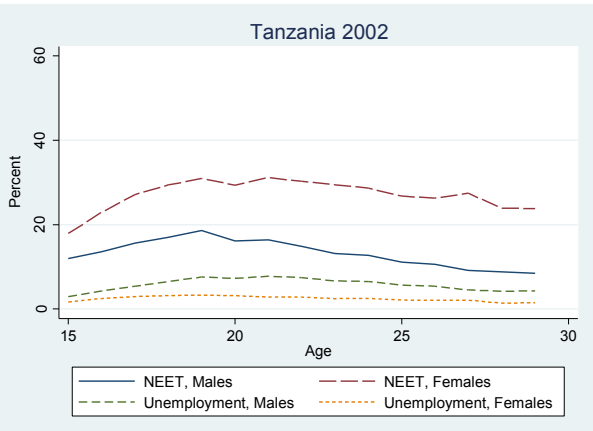


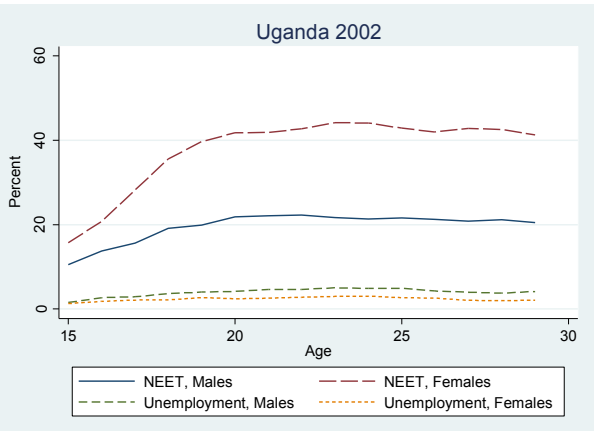

Kenya 1999
Percent
0
20
40
60
15
20
25
30
Age
NEET, Males
NEET, Females
Unemployment, Males
Unemployment, Females


Malawi 2008
Percent
0
20
40
60
15
20
25
30
Age
NEET, Males
NEET, Females
Unemployment, Males
Unemployment, Females

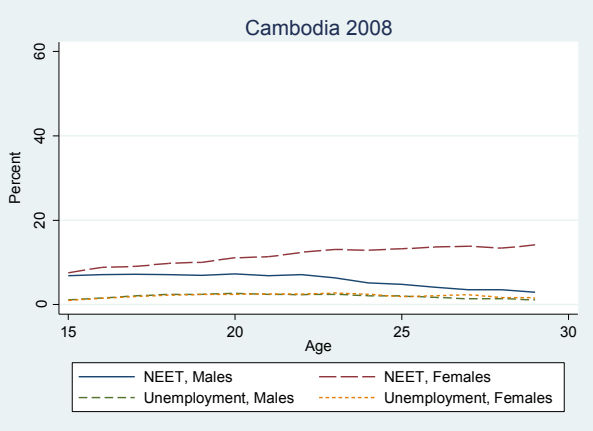

Senegal 2002
Percent
0
20
40
60
15
20
25
30
Age
NEET, Males
NEET, Females
Unemployment, Males
Unemployment, Females

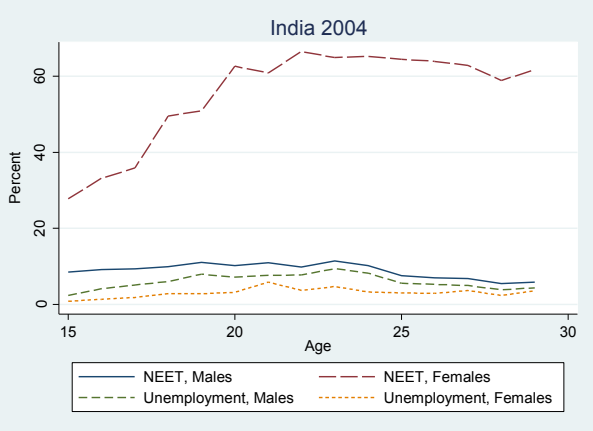

South Africa 2007
Percent
0
20
40
60
15
20
25
30
Age
NEET, Males
NEET, Females
Unemployment, Males
Unemployment, Females

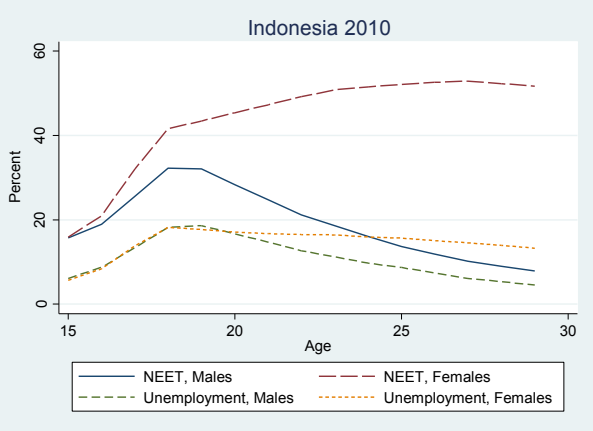

Tanzania 2002
Percent
0
20
40
60
15
20
25
30
Age
NEET, Males
NEET, Females
Unemployment, Males
Unemployment, Females

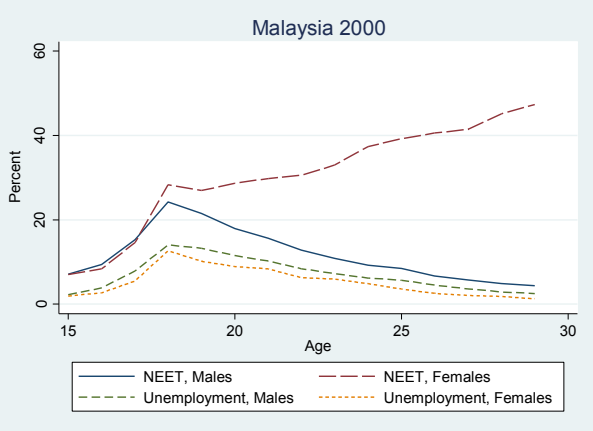

Uganda 2002
Percent
0
20
40
60
15
20
25
30
Age
NEET, Males
NEET, Females
Unemployment, Males
Unemployment, Females

D. South and Southeast Asia









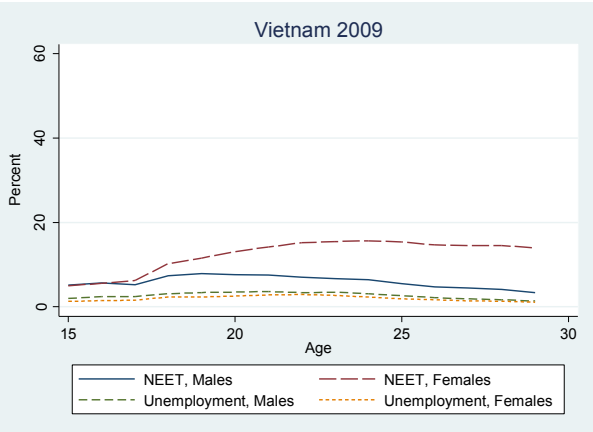
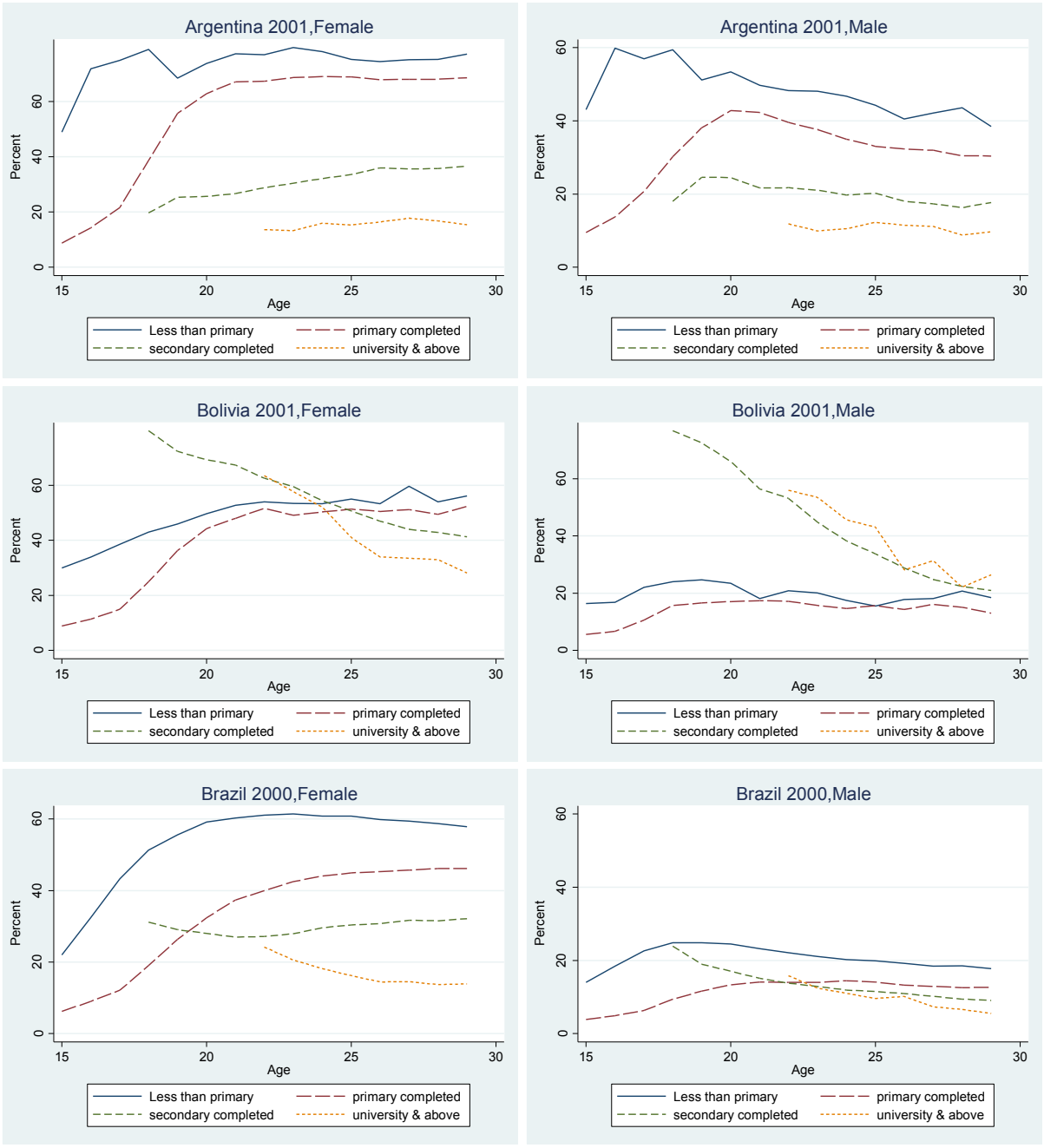
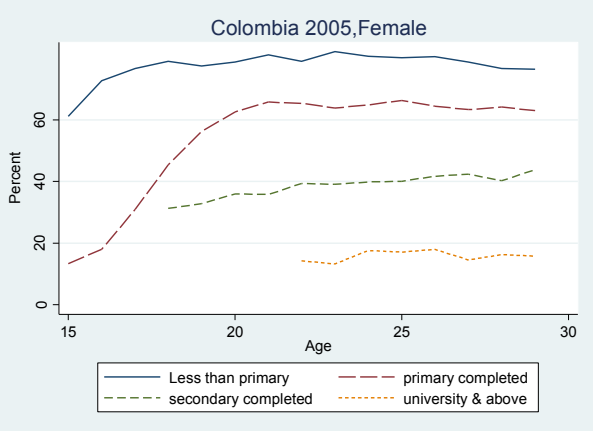
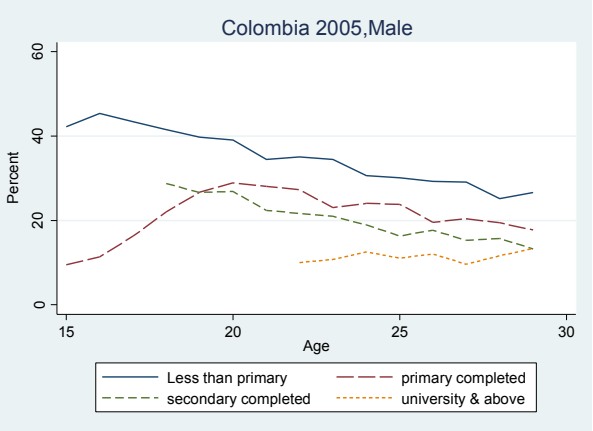


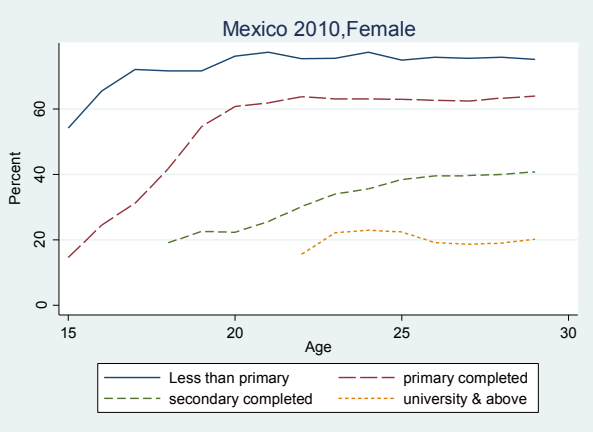
Figure 10. NEET Rate by Single Year of Age, Educational Attainment and Sex, Youths 15-29, Selected Countries, Latest Year.

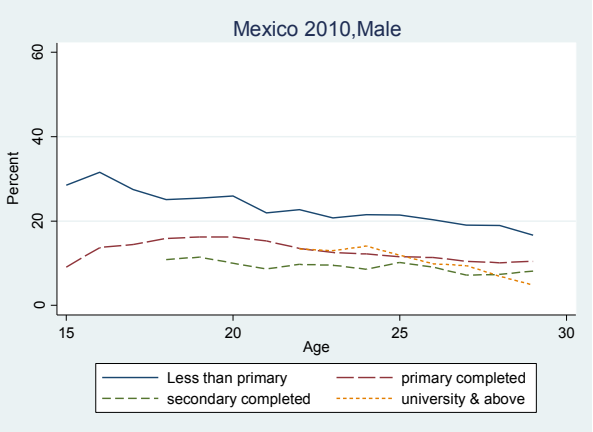
A. Latin America

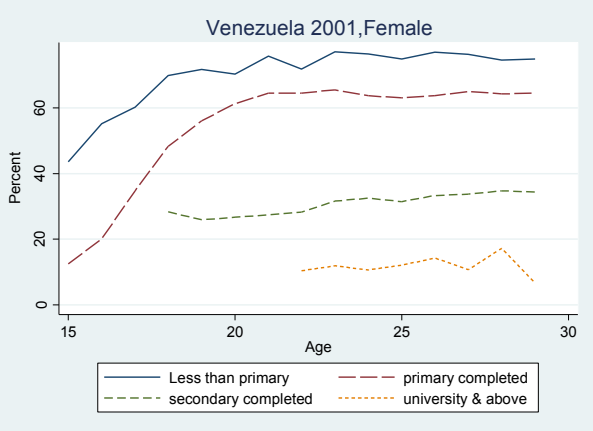


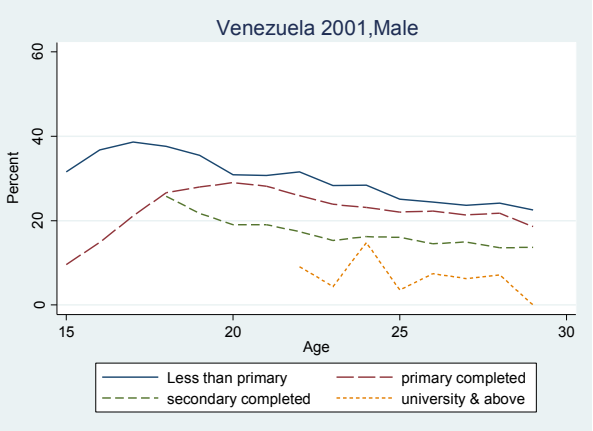

Colombia 2005,Female
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above


Colombia 2005,Male
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above

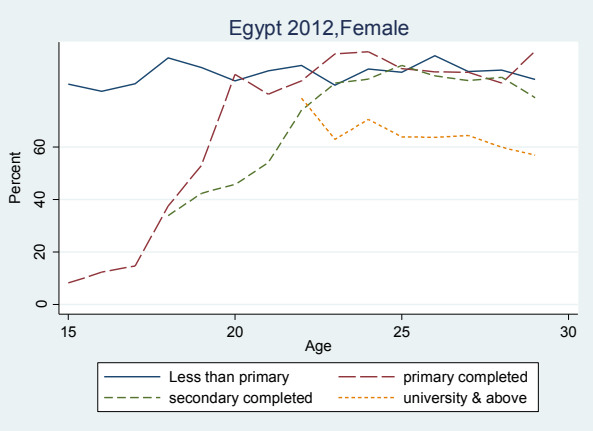

Mexico 2010,Female
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above

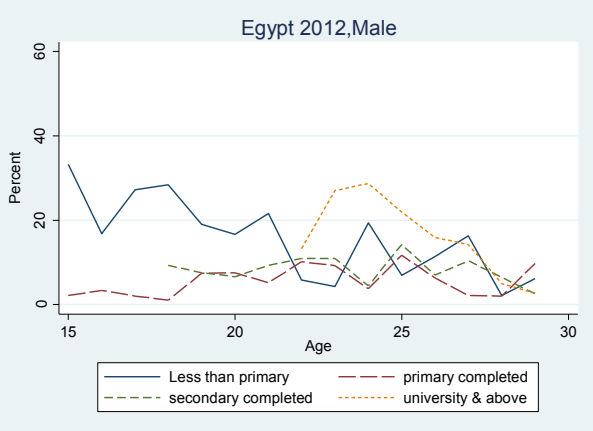

Mexico 2010,Male
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above

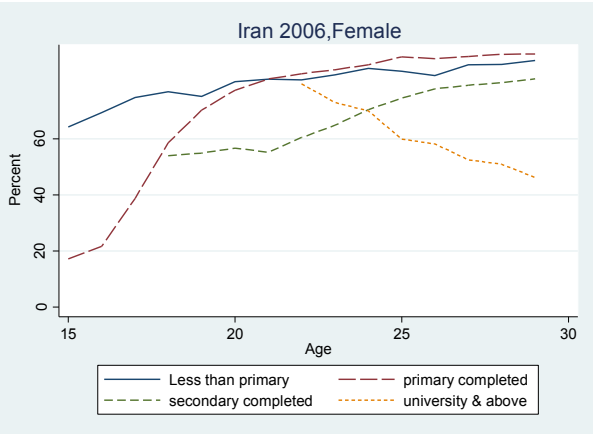

Venezuela 2001,Female
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above

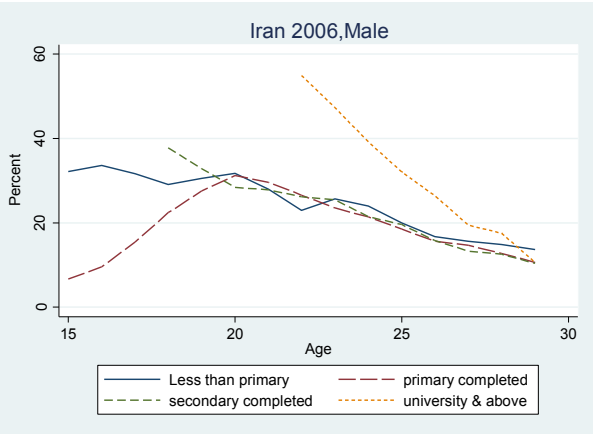

Venezuela 2001,Male
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above

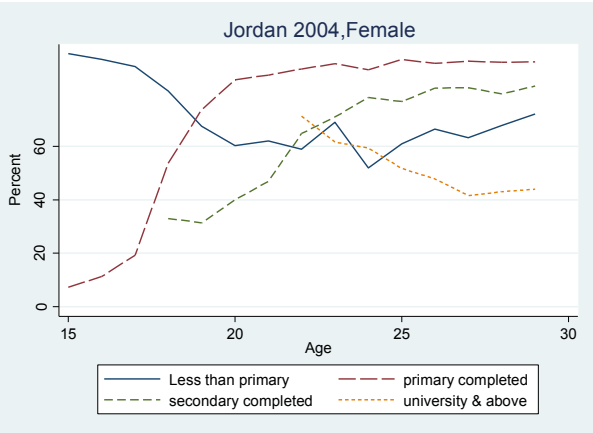
B. Middle East and North Africa

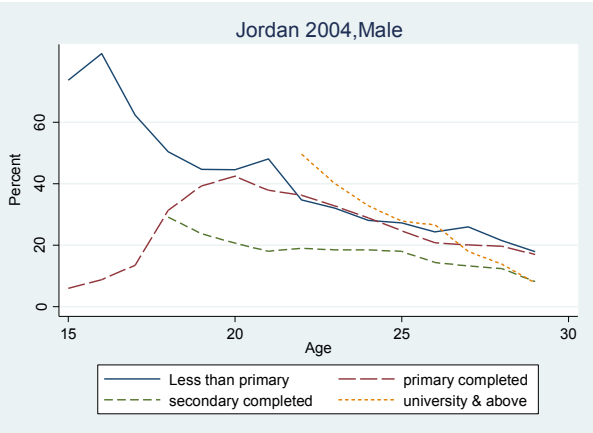




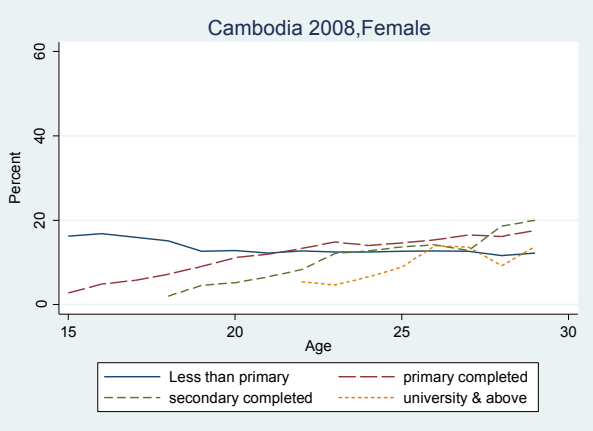


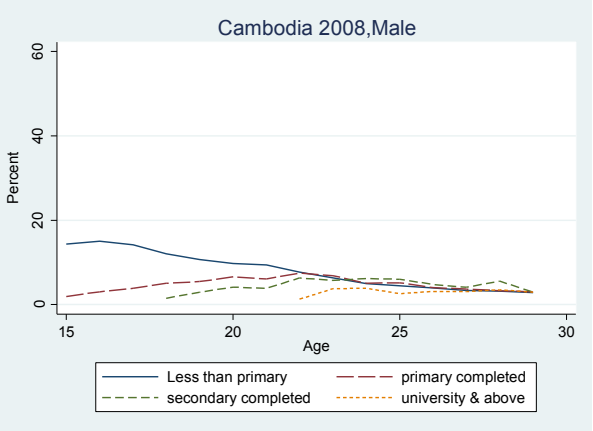


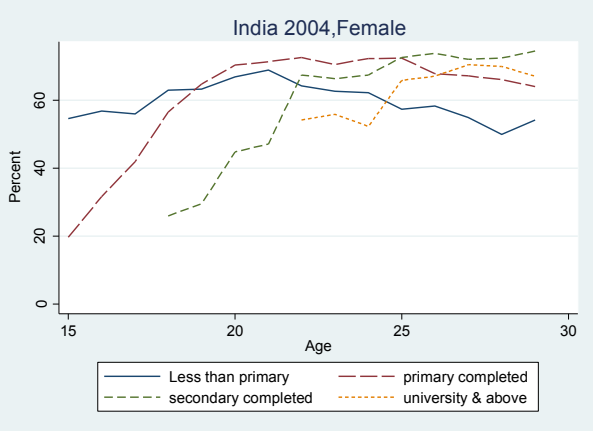


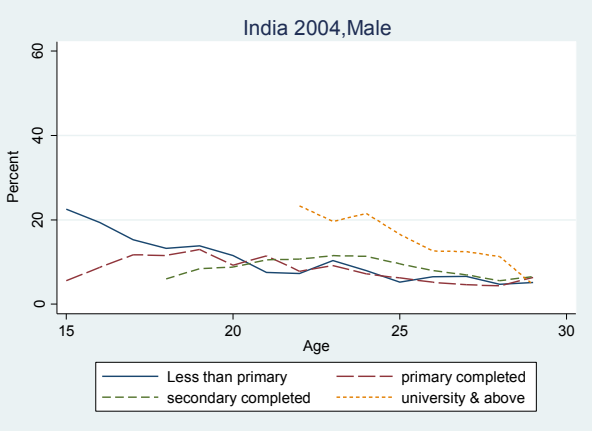


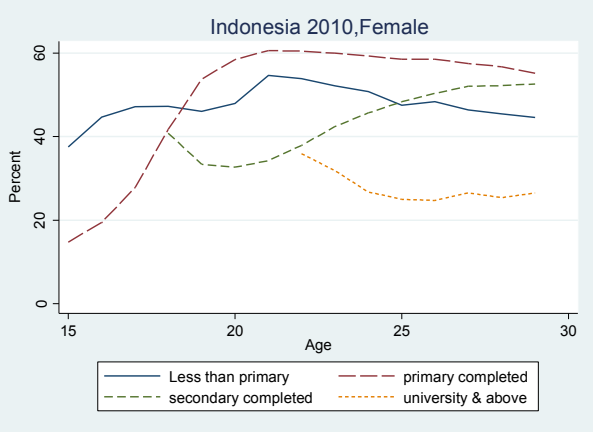
C. South and South East Asia

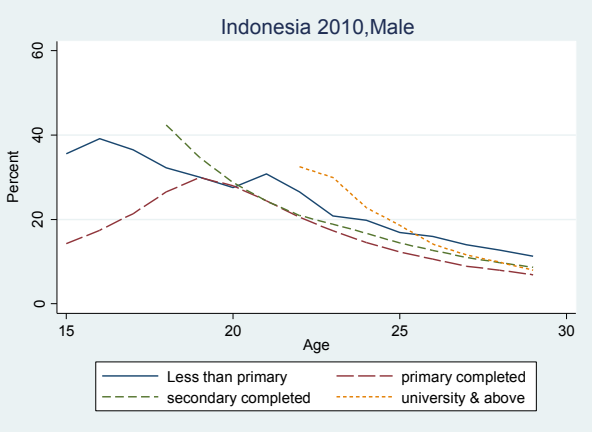


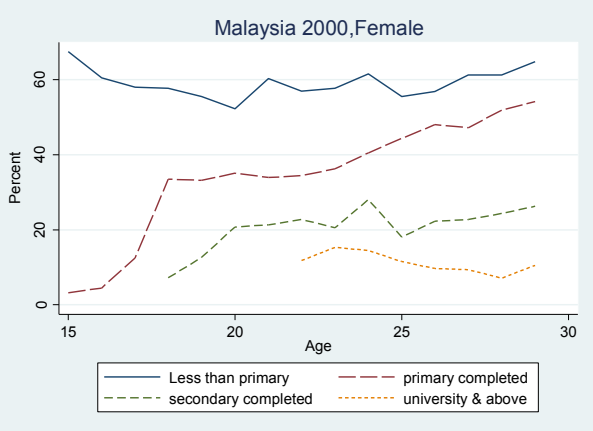


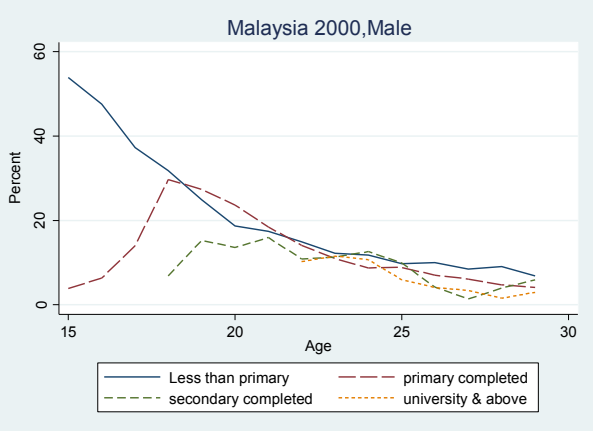








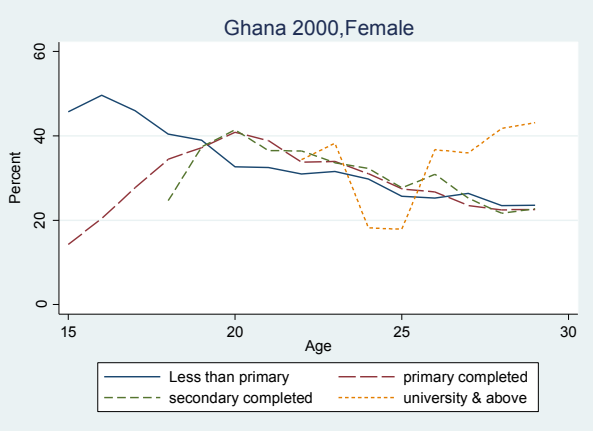

Malaysia 2000,Female
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above

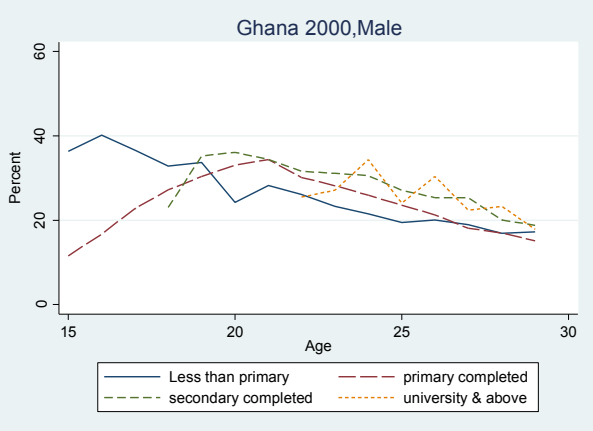

Malaysia 2000,Male
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above

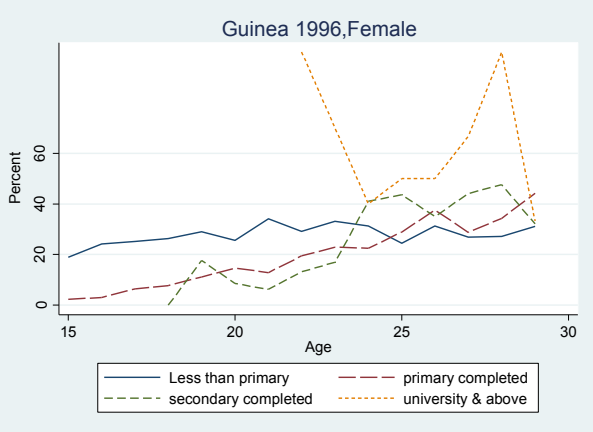

Vietnam 2009,Female
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above

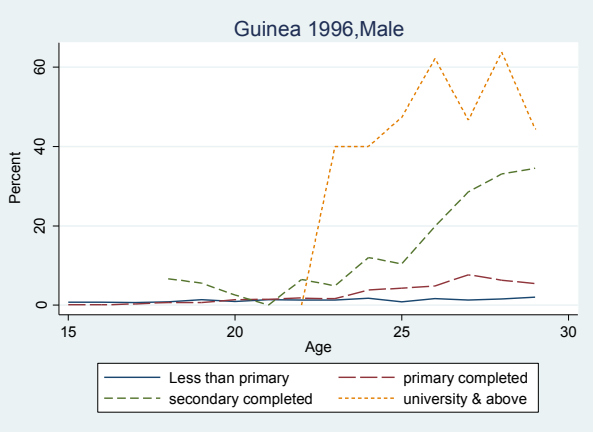

Vietnam 2009,Male
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above

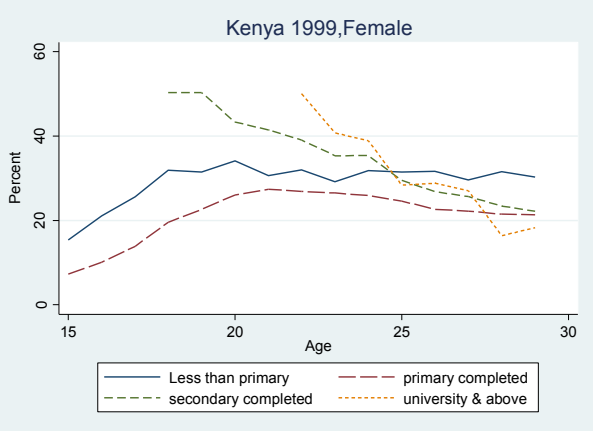
D. Sub-Saharan Africa

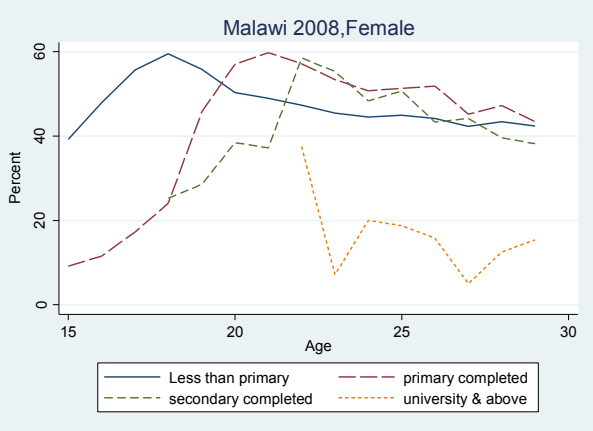


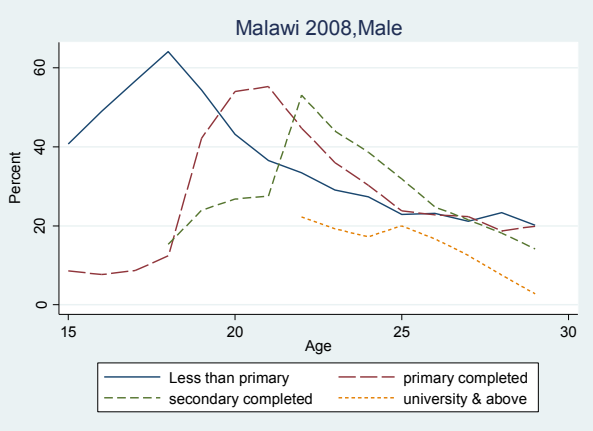


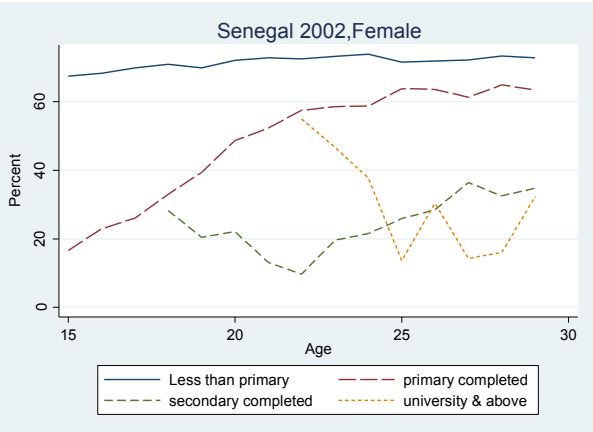


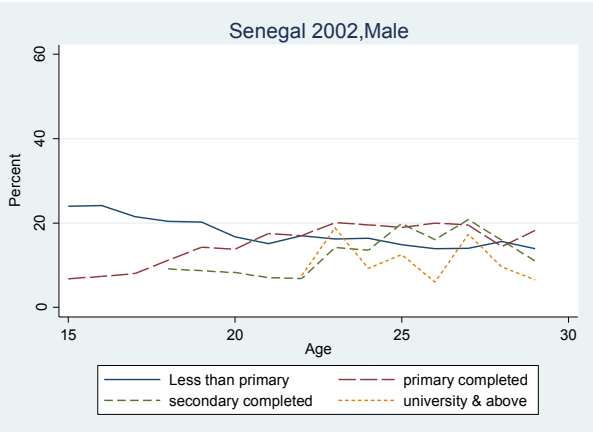


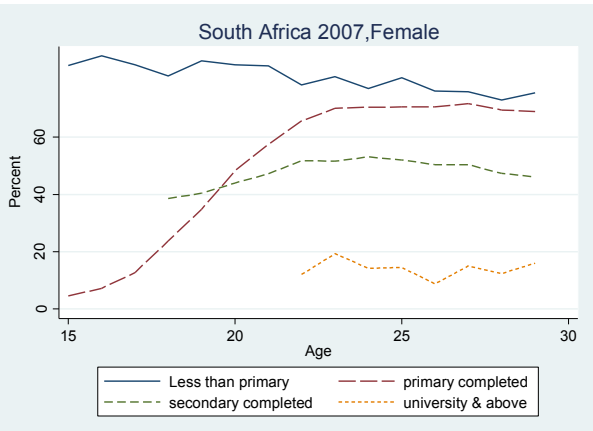


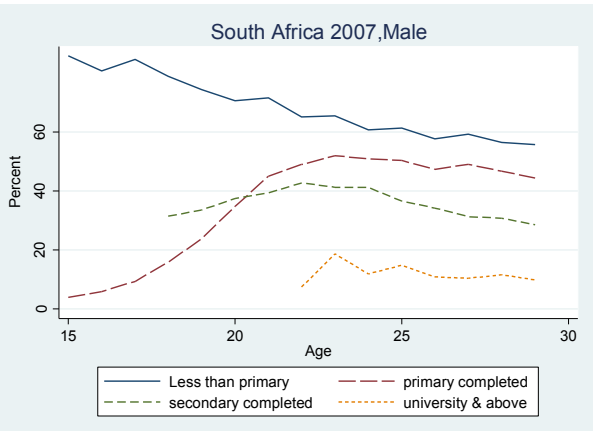

Malawi 2008,Female
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above

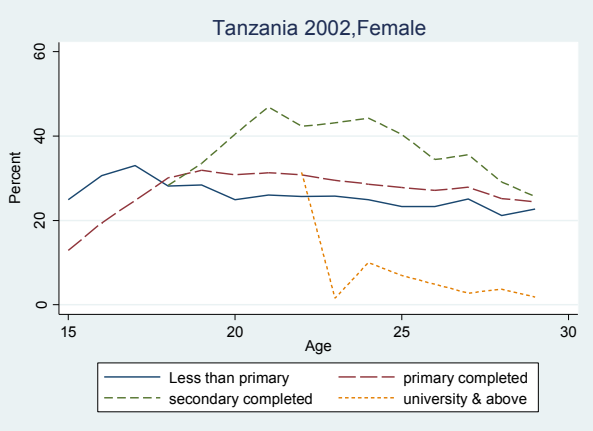

Malawi 2008,Male
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above

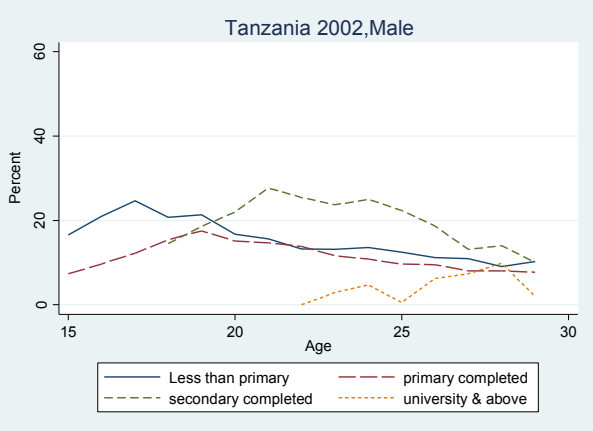

Senegal 2002,Female
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above

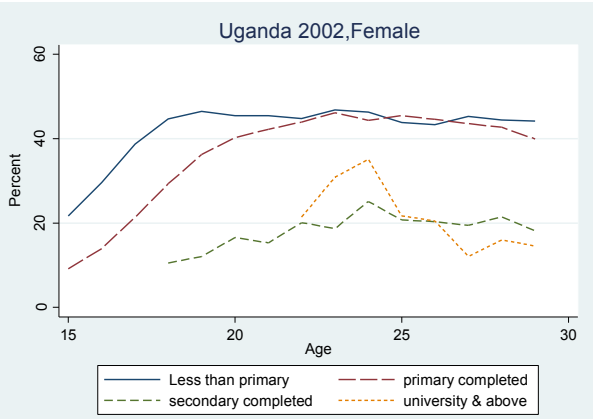

Senegal 2002,Male
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above


South Africa 2007,Female
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above


South Africa 2007,Male
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above


Tanzania 2002,Female
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above


Tanzania 2002,Male
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above


Uganda 2002,Female
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above

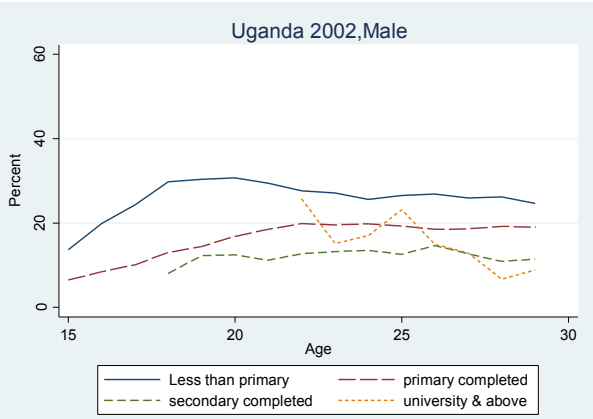
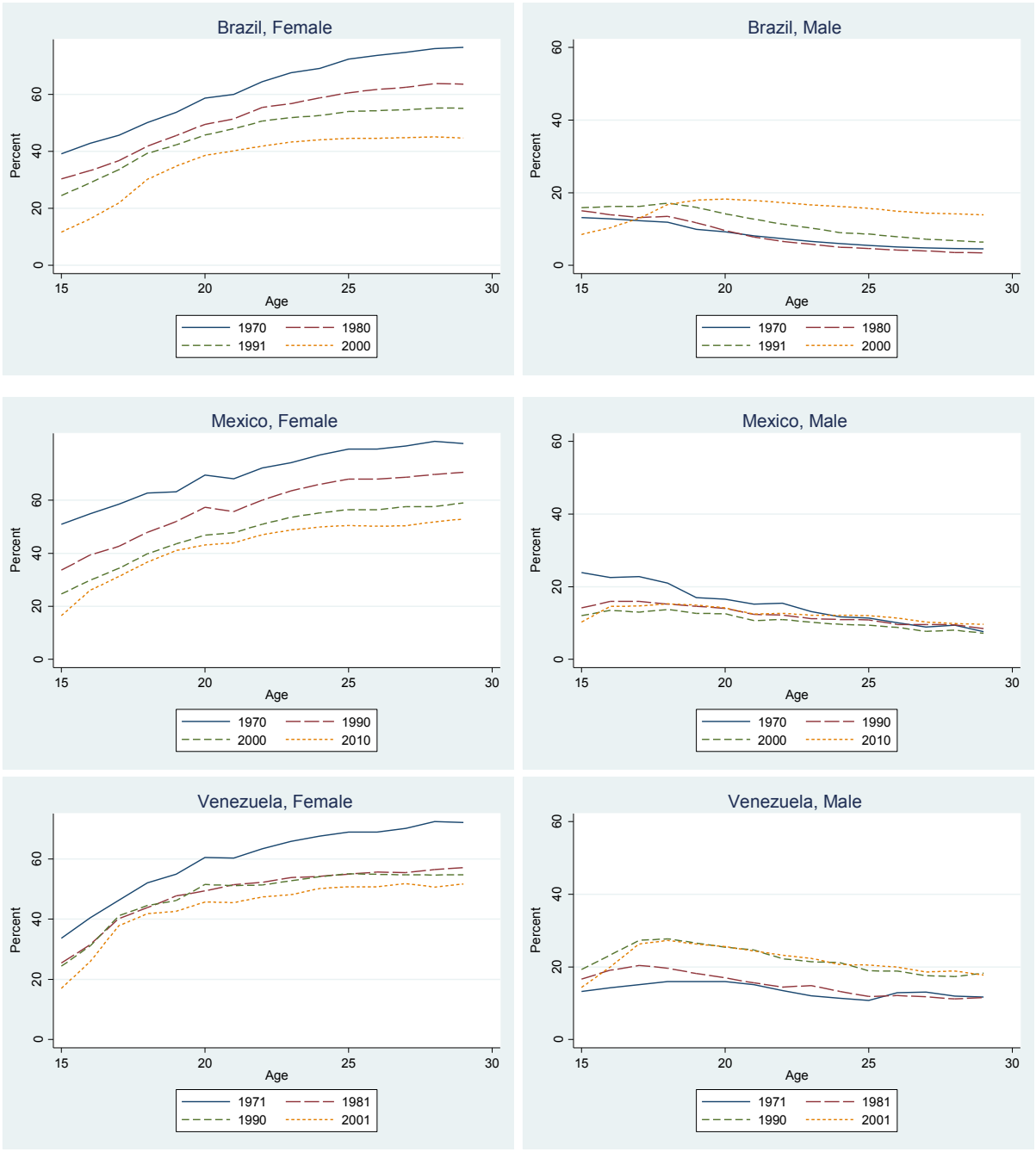

Uganda 2002,Male
Percent
0
20
40
60
15
20
25
30
Age
Less than primary
primary completed
secondary completed
university & above

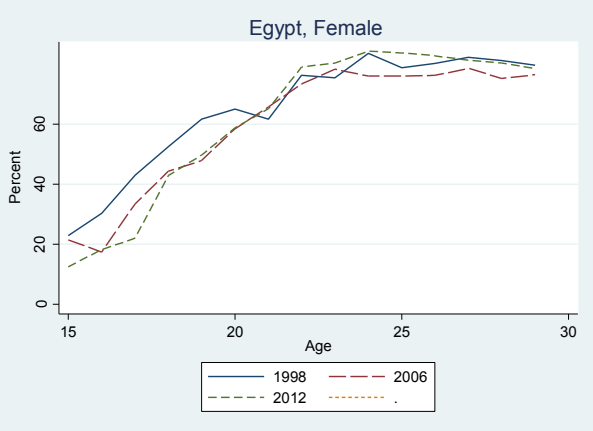
Figure 11. NEET Rate by Single Year of Age and Sex over Time for Youth (15-29), Selected Countries.

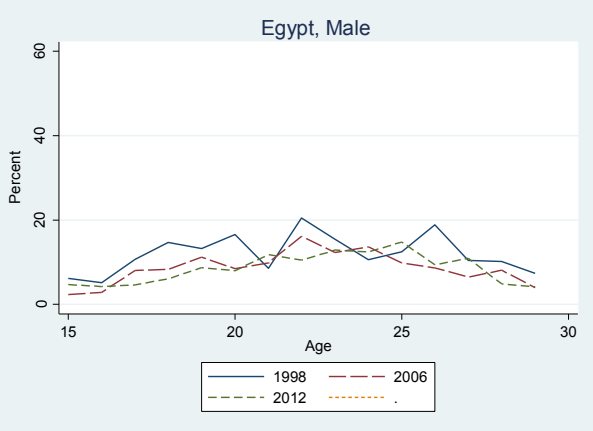
A. Latin America



Source: IPUMS-I

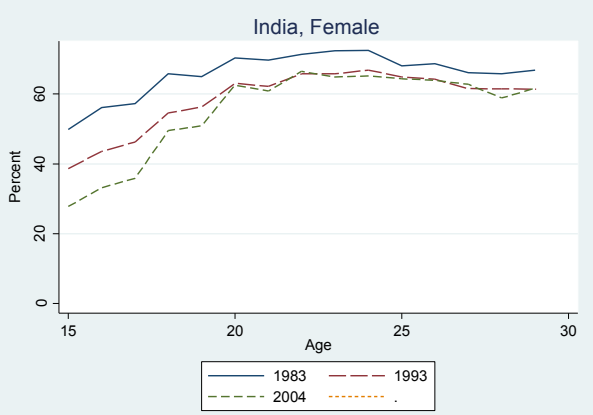
B. Middle East and North Africa

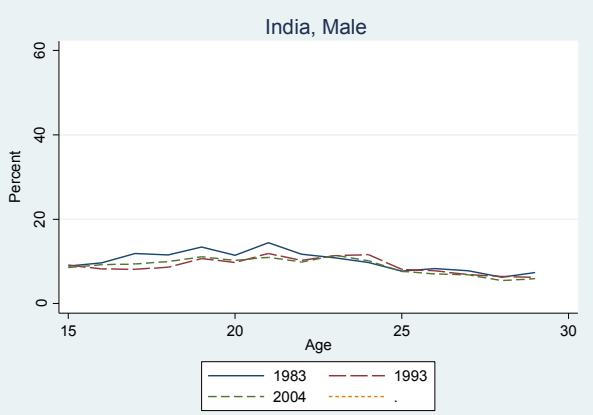


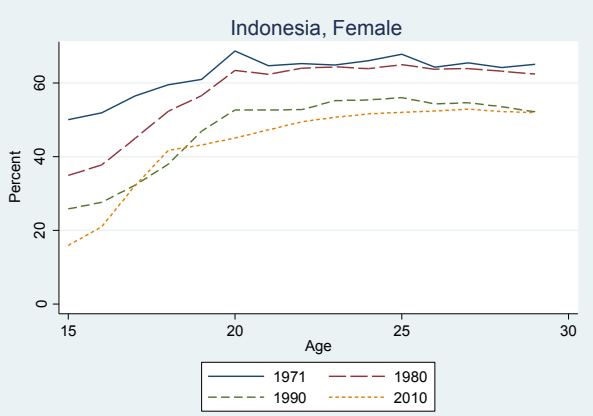


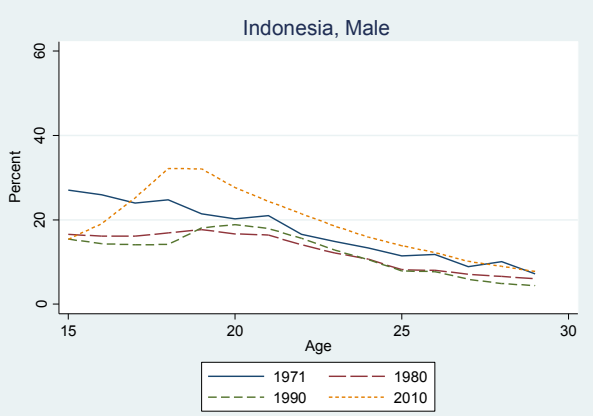
Source: ELMPs (1998, 2006, 2012)

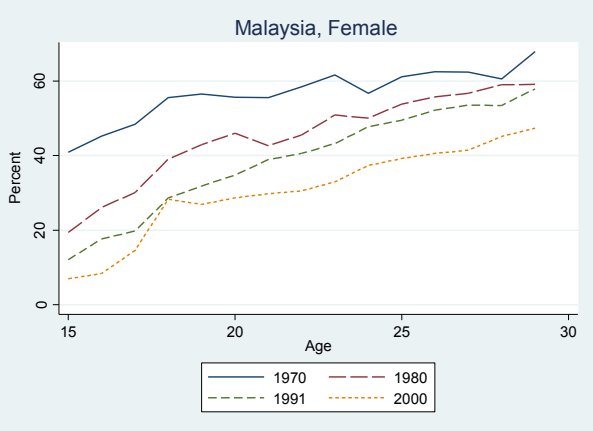
C. South and Southeast Asia

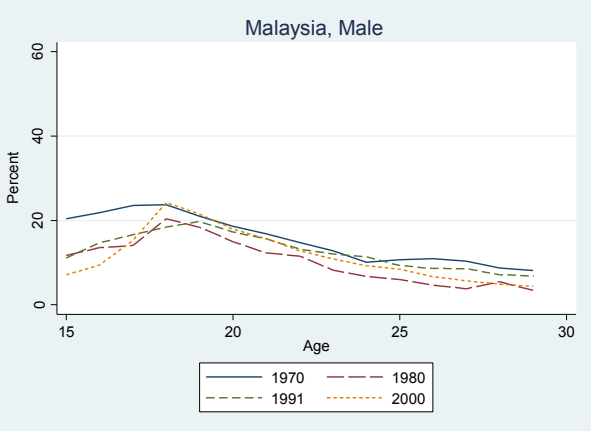






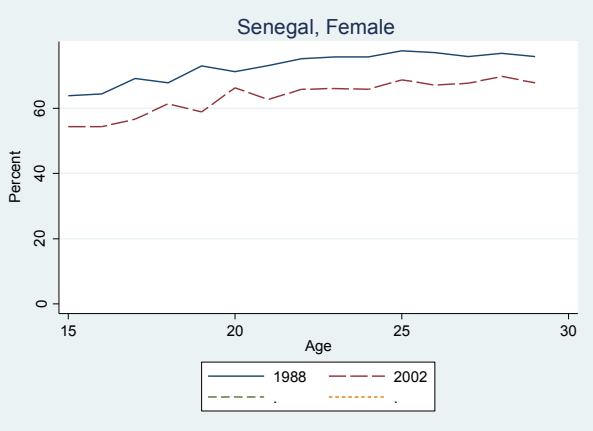


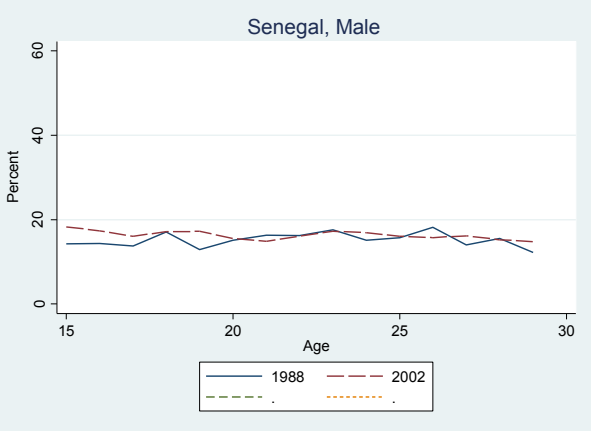


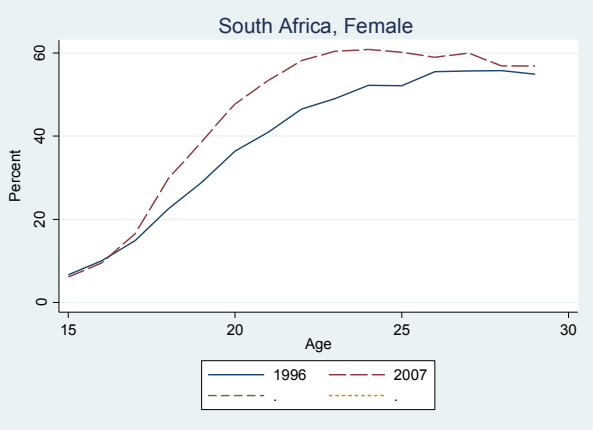


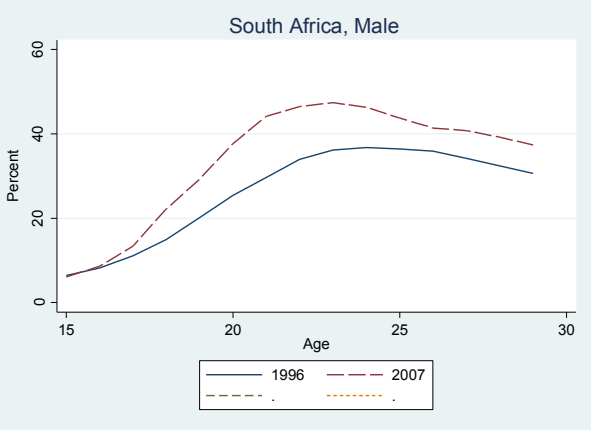
Source: IPUMS-I

D. Sub-Saharan Africa









Source: IPUMS-I